

# **DOCUMENTED RELEASE SAMPLING REPORT**

**FOR**

## **JOHN BULLY URANIUM MINE GRANTS LEGACY URANIUM SITES GRANTS, MCKINLEY COUNTY, NEW MEXICO**

Prepared for

**U.S. Environmental Protection Agency Region 6**

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1445 Ross Avenue  
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Contract No. EP-W-06-042

Technical Direction Document TO-0035-11-06-03

WESTON Work Order No. 20406.012.035.0645.01

NRC No. N/A

CERCLIS No. NMN000607164

FPN N/A

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START-3 PTL: Patrick Buster

Prepared by

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March 2012



## EXECUTIVE SUMMARY

The U.S. Environmental Protection Agency (EPA) tasked Weston Solutions, Inc. (WESTON®), the EPA Region 6 Superfund Technical Assessment and Response Team (START-3) contractor, to conduct Documented Release Sampling (DRS) at the John Bully Uranium Mine located near Ambrosia Lake, McKinley County, New Mexico.

The John Bully Uranium Mine was identified as a potential hazardous waste site and entered into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) under CERCLIS No. NMN000607164. According to the New Mexico Environment Department (NMED) Ground Water Quality Bureau Pre-CERCLIS Screening Assessment of the John Bully Uranium Mine, issued August 2010, the last documented site reconnaissance was conducted in 2007 by the New Mexico Energy, Minerals, and Natural Resources Department (NMEMNRD). On 23 August 2011, the EPA conducted an Airborne Spectral Photometric Environmental Collection Technology (ASPECT) overflight of the Ambrosia Lake area and collected measurements for exposure rate, total count rate, and elemental uranium. Results from the ASPECT overflight indicated elevated radiation exposure rates and gamma radiation activity (total count rate). Figure 1-2 presents the ASPECT overflight exposure rate results. The ASPECT overflight results also indicated that elemental uranium was detected at concentrations that ranged between 20 to 30 picocuries per gram (pCi/g) or up to 18 times the background concentration of 1.69 pCi/g.

START-3 conducted DRS at the John Bully Mine Site on 28 September 2011 that included collecting surface gamma radiation measurements in addition to conducting sampling and performing chemical/radiological analyses of surface soil. The specific sampling objectives for the DRS were to collect data that could be used to document a potential release of hazardous substances to the environment and to potentially warrant further site investigation and/or reclamation. Based on the results of the DRS sampling event, soil contamination attributable to the John Bully Uranium Mine was documented via these contributing factors:

- Eighteen out of the 70 stationary 1-minute gamma measurement locations had readings higher than two times the mean background average reading of 20,238 cpm, indicating a documented release at the John Bully Uranium Mine.



- Ra-226 soil sampling results from the John Bully Uranium Mine ranged from 2 to 752 pCi/g. Four sample results significantly exceeded three times the background Ra-226 result average of 1.69 pCi/g for the mine. This indicates a documented release at the John Bully Uranium Mine.
- Arsenic, molybdenum, and selenium were detected in soil samples that exceeded three times background concentrations, indicating a documented release at the John Bully Uranium Mine.

START-3 has prepared this Documented Release Sampling Report to describe the technical scope of work that was completed as part of the Technical Direction Document (TDD) No. TO-0035-11-06-03 under Contract No. EP-W-06-042 for EPA Region 6. The EPA Site Assessment Manager (SAM) was Lisa Price, and the START-3 Project Team Leader (PTL) was Patrick Buster.

☐

The EPA Task Monitor did not provide final approval of this report prior to the completion date of the work assignment. Therefore, Weston Solutions, Inc. has submitted this report absent the Task Monitor's approval.

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**\*All tables are provided as separate portable document format (PDF) files.**

## **1. INTRODUCTION**

WESTON, the EPA Region 6 START-3 Contractor, was tasked by EPA under Contract Number EP-W-06-042, TDD No. TO-0035-11-06-03 and Amendments A-D (Appendix G) to conduct Documented Release Sampling (DRS) at the John Bully Uranium Mine located in McKinley County, New Mexico. Site coordinates are Latitude 35.398737° North and Longitude - 107.780321° West. A Site Location Map is provided as Figure 1-1. All figures and tables are provided as separate portable document format (PDF) files. START-3 has prepared this DRS Report to provide the EPA with the field radiation scanning results and present the analytical data obtained during the field investigation performed at the site.

### **1.1 SITE BACKGROUND**

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), WESTON was tasked to perform DRS at the John Bully Uranium Mine (“the Site”) located near Ambrosia Lake, McKinley County, New Mexico.

The John Bully Uranium Mine was identified as a potential hazardous waste site and entered into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) under CERCLIS No. NMN000607164. According to the New Mexico Environment Department (NMED) Ground Water Quality Bureau Pre-CERCLIS Screening Assessment of the John Bully Uranium Mine, issued August 2010, the last documented site reconnaissance was conducted in 2007 by the New Mexico Energy, Minerals, and Natural Resources Department (NMEMNRD). On 23 August 2011, the EPA conducted an Airborne Spectral Photometric Environmental Collection Technology (ASPECT) overflight of the Ambrosia Lake area and collected measurements for exposure rate, total count rate, and elemental uranium. Results from the ASPECT overflight indicated elevated radiation exposure rates and gamma radiation activity (total count rate). Figure 1-2 presents the ASPECT overflight exposure rate results. The ASPECT overflight results also indicated that elemental uranium was detected at concentrations that ranged between 20 to 30 picocuries per gram (pCi/g) or up to 18 times the background concentration of 1.69 pCi/g.

START-3 has prepared this report to provide available background information collected for the John Bully Uranium Mine, discuss the DRS activities, and present the analytical data obtained as part of the investigation.

## **1.2 OBJECTIVES OF THE INVESTIGATION**

After reviewing the NMED memorandum and reviewing the results obtained from the ASPECT overflight, the EPA concluded that an investigation was needed to determine if hazardous substances have been released to the environment from past historical mining activities and despite reclamation histories. This investigation is designed to provide a high-confidence determination by direct observation, field measurement, and laboratory analysis that a hazardous substance has been released at the mine site, termed a “documented release.” The definition of a release under CERCLA (Section 101(22)) is *“[A]ny spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant)...”* For the purpose of this investigation, a documented release can be established by chemical analysis which requires attributing the hazardous substance to the site, determining background, demonstrating that the concentration of the hazardous substance in a release sample is significantly increased above background, and attributing some portion of the significant increase to the site. EPA will use this information obtained during the DRS to determine if additional investigation and/or reclamation is warranted and to prioritize those actions for all uranium mines in the Grants Mining District.

## **1.3 SCOPE OF WORK**

The DRS Scope of Work is intended to describe the tasks requiring completion in order to evaluate the John Bully Uranium Mine. As part of this DRS, START-3 performed the following major tasks:

- Prepared a site-specific Quality Assurance Sampling Plan (QASP), approved by the EPA, and Health and Safety Plan (HASP) prior to sampling activities.

- Evaluated the available information from the on-site observations, historical aerial photographs, area environmental information, and historical documents provided by the EPA.
- Conducted DRS field sampling/scanning activities on 28 September 2011. Samples were collected at various locations with the highest 1-minute stationary gamma measurements. The samples were collected in general accordance with the site-specific QASP and HASP to document the presence and migration of hazardous substances attributable to the Site.
- Submitted the DRS samples to National Environmental Laboratory Accreditation Program (NELAP) certified laboratories for analysis and reviewed and tabulated the resulting data.
- Compared the laboratory results to three times the background concentrations to establish a documented release.
- Prepared this report to present the findings of the DRS.

## **1.4 REPORT FORMAT**

The DRS report contains the following sections:

- Section 1 – Introduction
- Section 2 – Site Characteristics
- Section 3 – Documented Release Sampling
- Section 4 – Summary
- Section 5 – References

Additional information is provided in the following appendices:

- Appendix A Digital Photographs
- Appendix B START-3 Site Logbook
- Appendix C START-3 Quality Assurance Sampling Plan
- Appendix D Laboratory Data Packages
- Appendix E Laboratory Data Validation Packages
- Appendix F Reference Documentation
- Appendix G TDD No. 0035-11-06-03 and Amendments A-D

Tables and figures cited in this report are provided as separate PDF files. Photographs taken during the DRS activities are provided as Appendix A. The START-3 field logbook notes are provided as Appendix B. The site-specific QASP is provided as Appendix C.

## **2. SITE CHARACTERISTICS**

Information regarding the site location, description, and site history is included in the following subsections.

### **2.1 SITE LOCATION AND DESCRIPTION**

The John Bully Uranium Mine is within the Ambrosia Lake Mining District, located 19 miles north-northwest of Grants in McKinley County, New Mexico. The reclaimed area of the John Bully Mine Site is approximately 4 acres in size. The John Bully Uranium Mine can be reached from Grants, New Mexico via Highway 605 north for 13 miles, then turning west on Highway 509 for approximately 4.5 miles until a gated gravel road leads east toward the Site.

### **2.2 SITE HISTORY**

The Grants Mining District provided significant uranium extraction and production in New Mexico from the 1950s until late in the 20th century. Ninety-seven former legacy uranium mines and five mill sites have been identified in the Ambrosia Lake, Laguna, and Marquez subdistricts.

The John Bully Mine was considered a wet mine. The mineshaft was initially reclaimed and seeded in 1994. Surface rights are owned by the United Nuclear Corporation. The Helca Mining Company owns the mineral rights to the Site. Surface water flow drainage appears to be across the mine area toward the southeast and into the Voght Tank and an associated arroyo. The arroyo trends northeast-southwest and drains into an area approximately 1.5 miles southwest of the mine, near the Rio Algom Mill settling ponds. The Voght Tank is an unlined surface impoundment that appears to be approximately 10 acres in size when full, judging by historical aerial imagery and observations made during the site reconnaissance performed by START-3 on 28 September 2011, and it is thought to have received effluent from several wet mines in the area during mining operations (Reference 1).



### **3. DOCUMENTED RELEASE SAMPLING**

The specific information regarding field observations, sampling activities, background determination, gamma scanning and measurements, soil sampling, and deviations from the QASP are included in the following subsections (Reference 2).

#### **3.1 OVERVIEW**

START-3 was tasked to conduct DRS of the John Bully Uranium Mine, including collecting environmental samples, gamma scanning approximately 10% of the Site, and collecting 70 stationary 1-minute gamma measurements. The specific sampling objectives were to collect data that could be used to document a release of hazardous substances to the environment as a result of historical mining operations. The Contaminants of Concern (CoCs) include all identifiable gamma emitting radioisotopes, specifically the daughters of Uranium-238 (U-238) and Radium-226 (Ra-226). Additional CoCs include arsenic, molybdenum, selenium, and total uranium.

START-3 implemented the QASP at the John Bully Uranium Mine Site on 28 September 2011. START-3 collected gamma measurements sufficient to provide approximately 10% coverage of the surface area of the Site. Figure 3-1 illustrates the assessment area. Mine area gamma radiation distribution results are presented in Table 3-1. In addition, 1-minute stationary gamma measurements were collected at 70 evenly spaced grid locations throughout the mine area. The stationary gamma measurements are listed in Table 3-2 and the locations are presented on Figure 3-2. In addition, 6 soil samples and 1 duplicate soil sample were collected at the 1-minute stationary locations that had elevated gamma activity. One additional soil sample was collected from the perimeter of the Voght Tank, and one sediment sample was collected from the north end of the arroyo. Sample locations are illustrated on Figure 3-2. Three background soil samples (Figure 3-1) were collected to the east, south, and west near the perimeter of the mine area, and 1-minute stationary readings were collected at each location. The locations of the background samples are presented on Figure 3-1, and the 1-minute gamma measurements are listed in Table 3-2.

Surface soil samples were collected and submitted to a National Environmental Laboratory Accreditation Program (NELAP) certified laboratory for the following analyses: total metals

including arsenic, molybdenum, selenium, and total uranium by Methods SW846 6010/6020 and 7470/7471, and all identifiable gamma emitting radioisotopes by Method LANL ER-0130 gamma spectrometry. The analytical data were validated by START-3. Laboratory analytical results for radioisotopes and metals are presented in Tables 3-3 and 3-4, respectively. The laboratory data packages are included in Appendix D. The validated laboratory data packages are included in Appendix E.

### **3.2 FIELD OBSERVATIONS**

The site reconnaissance took place on 28 September 2011. The weather was sunny, with a high temperature of 81 degrees Fahrenheit and light winds. The mine area was generally flat and was fairly uniformly covered in desert grass vegetation and shrubs, although grass/shrub density varied depending on location. During the site reconnaissance, it was noted that the surface of the mine area mostly consisted of an orange to gray soil. Several mounds of grayish colored soil were noted around the western site of the Voght Tank. Gamma readings around the western side of the Voght Tank and to the north within the arroyo, for the most part, were significantly higher than the rest of the mine area.

### **3.3 BACKGROUND DETERMINATION**

The START-3 QASP (Reference 2) protocol determines the background for the individual site as the mean of the field measurements and laboratory results of samples collected from four locations at the perimeter of the property. These four sample locations correspond to the four cardinal directions of the compass (north, east, south, and west). The protocol indicates that a site background location should have similar physical, chemical, geological, radiological, and biological characteristics of the legacy mine site if there are no impacts from uranium mining and milling at the Site. START-3 collected three background soil samples to the east, south, and west of the mine Site, where 1-minute stationary gamma measurements were also collected. It was determined that a representative background sample could not be collected on or near the northern perimeter of the John Bully Uranium Mine, as gamma radiation measurements were significantly higher than those collected on the remainder of the Site. During the mine area investigation, it was noted that whenever a grayish colored soil was encountered, gamma activity

was significantly elevated. The northern area of the John Bully Uranium Mine and beyond appeared to be comprised of mostly the grayish colored soil, where gamma scanning measurements were frequently reading in excess of 100,000 counts per minute (cpm).

### **3.4 GAMMA SCANNING**

Due to the size of the John Bully Uranium Mine, it was determined that approximately 10% of the surface area would be scanned using a 2X2 NaI detector held approximately 1 meter above the ground surface in conjunction with a Global Positioning System (GPS) unit. Evenly placed transects were walked across the mine site from one end of the disturbed claim boundary to another. Each transect was approximately 100 feet apart. One-second measurements of gamma activity were recorded and electronically attached to the appropriate GPS designation for the subsequent plotting and depiction of the ambient gamma activity. A total of 4,241 gamma radiation measurements were collected from the mine-site, ranging from 14,466 cpm to 529,832 cpm. John Bully Uranium Mine gamma radiation results and statistics can be observed in Table 3-1 and on Figure 3-1.

### **3.5 STATIONARY GAMMA MEASUREMENTS**

Stationary 1-minute gamma measurements were collected at seventy 100-foot evenly spaced grid locations across the John Bully Uranium Mine, using the same type of instrumentation and at the same height above the ground surface as the gamma scanning measurements. Because the stationary measurements are integrated over 1-minute intervals versus 1-second intervals, the measurements provide a more accurate measurement of the ambient gamma activity at that point. The QASP protocol states that a single-point measurement greater than two times the background average concentration indicates a documented release at the mine (Reference 2). At the 70 total stationary locations, gamma measurements ranged from 19,276 cpm to 108,359 cpm, with 18 measurements exceeding two times the background average measurement of 20,238 cpm. The stationary measurement locations and measurements are illustrated in Figure 3-2 and presented in Table 3-2.

### 3.6 SOIL SAMPLING

START-3 collected 8 soil samples (including 3 background and 1 duplicate sample) at 0 to 6-inch depths at locations identified by the stationary measurements as being suspect. Figure 3-2 depicts the sampling locations, and Table 3-2 presents the 1-minute stationary gamma measurements at each sample location. Surface soil samples were collected and submitted for total metals including total uranium, molybdenum, tin, and mercury by Methods SW846 6010/6020 and 7470/7471, and all identifiable gamma emitting radioisotopes by Method LANL ER-0130 Gamma Spectrometry. The QASP states that if any sample contains U-238 as determined by alpha spectrometry or Ra-226 as determined by gamma spectrometry at a concentration equal to or greater than three times the mean background average concentration, the Site will be identified as having a documented release (Reference 2). Four samples from the mine site exceeded three times the background average concentration for Ra-226. The analytical data were validated by START-3. The metals and radioisotopes laboratory results are included in Tables 3-3 and 3-4. Laboratory data are presented in Appendix D, and the validated laboratory data packages are included in Appendix E.

### 3.7 DEVIATIONS FROM THE QASP

The following deviation from the QASP occurred during the field work:

- A suitable background sampling location on the northern side of the Site could not be located due to significantly elevated gamma scan readings and a noticeable difference in the physical landscape. Background locations should have similar physical, chemical, geological, radiological, and biological characteristics as the legacy mine site.

## 4. SUMMARY

START-3 conducted DRS at the John Bully Mine Site on 28 September 2011 that included collecting surface gamma radiation measurements, in addition to conducting sampling and performing chemical/radiological analyses of surface soil. The specific sampling objectives for the DRS were to collect data that could be used to document a potential release of hazardous substances to the environment and to potentially warrant further site investigation and/or reclamation. Based on the results of the DRS sampling event, soil contamination attributable to the John Bully Uranium Mine was documented via these contributing factors:

- Eighteen out of the 70 stationary 1-minute gamma measurement locations had readings higher than two times the mean background average of 20,238 cpm, indicating a documented release at the John Bully Uranium Mine.
- Ra-226 soil sampling results for the John Bully Uranium Mine ranged from 2 to 752 pCi/g. Four soil sample results significantly exceeded three times the background Ra-226 result average of 1.69 pCi/g. This indicates a documented release at the John Bully Uranium Mine.
- Arsenic, molybdenum, selenium, total uranium, and vanadium were detected in soil samples that exceeded three times the background concentrations, indicating a documented release at the John Bully Uranium Mine.

## 5. REFERENCES

1. NMED (New Mexico Environment Department). Pre-CERCLIS Screening Assessment of the John Bully Mine. 16 August 2010.
2. Weston Solutions, Inc. Quality Assurance Sampling Plan for the John Bully Uranium Mine, Grants, McKinley County, New Mexico. September 2011.

## **APPENDIX A**

### **DIGITAL PHOTOGRAPHS**

Photos are available for the OSC/TM review. To receive a review copy of the attachment, please contact the START-3 PTL. Photos will also be provided with the Final Report CD.

## **APPENDIX B**

### **START-3 SITE LOGBOOK**



START-3 EPA REGION 6



*"Rite in the Rain"*

ALL-WEATHER

**JOURNAL**

No. 391

JOHN BULLY

~~SANDSTONE~~ URANIUM MINE

TDO - TO - 0035 - 11-06 - 03

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5

INCH

*"Rite in the Rain"*

ALL-WEATHER WRITING PAPER

Name John Bully Uranium MineAddress 5599 San Felipe, Ste 700  
Houston, TX 77081

Phone \_\_\_\_\_

Project ~~Sandstone Uranium Mine~~ <sup>PB</sup>John Bully Uranium MineTO-0035-11-06-0320406.012.035.0645.01

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REFERENCE

DATE

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20406.012.035.0644.01  
 9/28/11 John Bully ~~Scrubland~~ Uranium Mine START-3

START-3 Team Members: Patrick Buster, Olin Garren,  
 Patrick Bond, Thomas Evans. EPA personnel: LuDema Turner.

Equipment: Lullum 44-10 meter probe # PR276584 paired with  
 meter 138346 (Lullum 2221) and Trimble XT 600 Explorer 2008

Series # PN: 70950-20. Pascale probe model 44-9 # RFW23403

also included for documentation Weather forecasts: High 80°F,  
 low 43°F, winds N at 10 mph, 20% chance of T-storms, other  
 wise mostly sunny. Health and Safety meeting includes:

wearing sunscreen, hydration, slips + falls, rocky/scrubby terrain.  
 Lots of animal burrows are present - which is critical to watch  
 footing. HASP, Fire extinguisher, and First aid/BBQ kit are in back  
 seat of vehicle. Be aware of surroundings at all times. -PB

0700 Arrive at Grants EPA command post to load equipment.

John Bully photos begin at photo #284 on camera. -PB

0755 Arrive at gate to mine road. Awaiting UNC to  
~~unlock~~ unlock. -PB

0810 Arrive at John Bully minesite. -PB

0830 Begin laying out 70 - stationary points on 11.8 acre  
 John Bully uranium site. Team 1 will lay out  
 points, then scan the perimeter of the Vought Tank and  
 the arroyo, then swath and gamma scan ~~the~~ 10%  
 of the John Bully site while Team 2 collects 1  
 minute readings at 70 points. -PB

1041 Complete 1-minute scans at 70 points. -PB

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John Bully ~~Scrubland~~ Uranium Mine START-3

1146 Team 1 is gamma scanning 10% of site. Team  
 2 samples ~~good~~ single point locations 11, 30, 41 (dup),  
 48, 67, and 68. Will also sample the arroyo and on  
 the perimeter of Vought Tank, along with background  
 locations. -PB

1315 Collect background samples E, W, and South of site  
 perimeter. Could not collect samples north of the site  
 do to elevated readings to 200,000 cpm. Collect  
 sample from Arroyo north of Vought tank -  
 ~400,000 cpm in Arroyo. Collect sample from  
 perimeter of Vought Tank. Readings in center of  
 tank ~30,000 cpm, on perimeter 80,000-400,000  
 cpm. Homogenize samples and put soil into cot-  
 ainers. -PB

1345 Leave site for EPA Command Post. -PB

1415 Arrive at Command Post to unload equipment. START-3  
 will now create SCRIBE database for samples and  
 download GPS data, process samples for shipment  
 tomorrow, get equipment ready to ship tomorrow. -PB

#### Single Point Readings (1-minute)

Location ID	Time	CPM	Comment
01	0838	25,961	-
02	0840	26,020	-
03	0842	26,411	-
04	0844	19,937	-

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Single Point Scatter Readings (1-minute)			
Time	CPM	Location ID	Comment
0846	18,276	05	photo taken
0848	24,563	06	—
0850	26,921	07	—
0851	27,105	08	—
0853	27,242	09	—
0855	30,208	10	photo taken
0856	62,653	11	sampled, photo taken
0858	27,243	12	—
0859	27,537	13	—
0901	27,465	14	—
0902	22,836	15	photo taken
0904	31,612	16	—
0905	23,327	17	—
0907	22,547	18	—
0909	28,024	19	—
0911	24,967	20	photo taken
0913	28,966	21	—
0914	36,514	22	—
0916	34,712	23	—
0918	28,558	24	—
0919	42,582	25	photo taken
0922	43,650	26	—
0923	32,694	27	—
0927	34,351	28	—

20406.012.035.0644.11	5	John Gully	START-3
Single Point Scatter Readings (1-minute)			
Time	CPM	Location ID	Comment
0929	32,164	29	—
0930	66,720	30	sampled, photo taken
0932	58,309	31	—
0934	35,813	32	—
0935	28,763	33	—
0937	37,864	34	—
0939	20,549	35	photo taken
0941	32,875	36	—
0942	50,291	37	—
0944	50,707	38	—
0945	41,403	39	—
0947	38,201	40	no photo taken
0949	108,359	41	sampled, photo taken
0950	27,794	42	—
0952	28,983	43	—
0954	29,696	44	—
0955	27,553	45	photo taken
0956	26,017	46	—
0958	33,292	47	—
0959	74,382	48	sampled, photo taken
1002	54,058	49	—
1003	50,169	50	photo taken
1004	35,283	51	—

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John Billy

Sandstone Uranium Mine

START-3

## Single Point Readings (1-minute)

Location ID	Time	CPM	Comment
52	1006	34,403	—
53	1009	20,678	—
54	1010	26,085	—
55	1012	30,972	Photo taken
56	1014	38,685	—
57	1015	41,714	—
58	1017	34,510	—
59	1018	30,680	—
60	1020	33,568	Photo taken
61	1022	29,626	—
62	1024	27,238	—
63	1025	30,452	—
64	1027	29,069	—
65	1029	31,617	Photo taken
66	1030	26,226	—
67	1032	76,808	Sampled, photo taken
68	1034	85,903	Sampled, photo taken
69	1035	72,395	—
70	1038	26,464	Photo Taken
JB BKGD-W	1215	19,292	—
JB BKGD-S	1220	18,893	—
JB BKGD-E	1240	22,529	—
VTP-01	1300	278,280	—

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John Billy

Sandstone Uranium Mine

START-3

## Single Point Readings (1-minute)

Location ID	Time	CPM	Comment
AR-01	1310	396,482	—

1900 Finish creating SCRIBE files for Sandstone and John Billy minesites. Label and process samples for shipment to ALS and Eberline for Gamma Spectroscopy, TAL Metals, Mo, Sr, Hg, and Total U analysis. — PB

1900  
PB

## **APPENDIX C**

### **START-3 QUALITY ASSURANCE SAMPLING PLAN**

**OBSERVED RELEASE SAMPLING  
QUALITY ASSURANCE SAMPLING PLAN  
FOR  
JOHN BULLY URANIUM MINE  
GRANTS LEGACY URANIUM SITES  
GRANTS, MCKINLEY COUNTY, NEW MEXICO**

Prepared for

**U.S. Environmental Protection Agency Region 6**

Linda Carter, Project Officer

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Contract No. EP-W-06-042

Technical Direction Document TO-0035-11-06-03

WESTON Work Order No. 20406.012.035.0645.01

NRC No. N/A

CERCLIS No. NMN000607164

FPN N/A

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September 2011

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**All figures are provided as separate portable document format (PDF) files.**

## 1. INTRODUCTION

Weston Solutions, Inc. (WESTON®), the Superfund Technical Assessment and Response Team (START-3) Contractor, has been tasked by the U.S. Environmental Protection Agency (EPA) Region 6 under Contract Number EP-W-06-042, Technical Direction Document (TDD) No. TO-0035-11-06-03 (Appendix D) to conduct Observed Release Sampling (ORS) at the John Bully Uranium Mine located in McKinley County, New Mexico. Site coordinates are Latitude 35.400139° North and Longitude -107.780463° West. A Site Location Map is provided as Figure 1-1. All figures are provided as separate portable document format (PDF) files. START-3 has prepared this Quality Assurance Sampling Plan (QASP) to describe the technical scope of work to be completed as part of the TDD.

### 1.1 PROJECT OBJECTIVES

START-3 is providing technical assistance to EPA Region 6 for conducting ORS at three legacy uranium mines (the John Bully, Sandstone, and Ann Lee Uranium Mine Sites). The purpose of the ORS is to determine if past mining activities resulted in releases of hazardous substances to the environment at uranium mine sites that have a wide range of reclamation histories. START-3 will assess the existence and migration of hazardous substances and identify the receptors, or targets, potentially exposed to the hazardous substances. This Quality Assurance Sampling Plan (QASP) provides the generic guidance for conducting ORS and specific field sampling for the John Bully Uranium Mine. A determination regarding ORS at the Ann Lee Uranium Mine will be made by EPA at a later date.

The ORS objective will be achieved by evaluating data obtained during the site assessment using a 2x2 NaI detector in conjunction with a Global Positioning System (GPS) unit. The detector will be mounted on a cart or hand-held approximately 15 inches above the soil surface. The instrument will be set with an “open window to allow detection of the broad spectrum of gamma energies associated with the naturally occurring radionuclides. Laboratory samples will be collected from surface soil and potential surface water on-site, downgradient, and at background

locations. Sediment samples in the surface water pathway may also be collected during this ORS. Section 4.1 describes the laboratory analyses that will be used as part of this investigation.

## **1.2 PROJECT TEAM**

The Project Team will consist of START-3 personnel including Patrick Buster as the Project Team Leader (PTL), a Data Manager, and a START-3 Field Team Leader (FTL) who will also act as the Field Safety Officer (FSO). The FTL will oversee collection of the samples as necessary, record the activities at each sample location in the field logbook, and verify sample documentation. Sample documentation and preparation is also the responsibility of START-3. The FTL will be responsible for documenting the work performed and will serve as START-3 liaison to EPA Region 6.

## **1.3 QASP FORMAT**

This QASP has been organized in a format that is intended to facilitate and effectively meet the objective of the removal assessment. The QASP is organized as follows:

- Section 1 – Introduction
- Section 2 – Site Background
- Section 3 – Sampling Approach and Procedures
- Section 4 – Laboratory Analyses
- Section 5 – Data Validation
- Section 6 – Water Sampling
- Section 7 – Quality Assurance

## **2. SITE BACKGROUND**

Information regarding the site location, description, and site history is included in the following subsections.

### **2.1 SITE LOCATION AND DESCRIPTION**

The John Bully Uranium Mine site is within the Ambrosia Lake Mining District, located 19 miles north-northwest of Grants in McKinley County, New Mexico. The reclaimed area of the John Bully Mine site is approximately 4 acres in size and was in operation from the late 1950s until 1980.

The Voght Tank is located less than a half-mile and in between the Sandstone and John Bully Mine sites, and the tank is thought to have received effluent from mining operations. The Voght Tank appears to be approximately 10 acres in size when full, judging by historical aerial imagery.

### **2.2 SITE HISTORY**

The Grants Mining District provided significant uranium extraction and production in New Mexico from the 1950s until late in the 20th century. Ninety seven (97) former legacy uranium mines and five mill sites have been identified in the Ambrosia Lake, Laguna, and Marquez subdistricts.

The John Bully Mine was also considered a wet mine. The mineshaft was initially reclaimed and seeded in 1994. The Voght Tank is located immediately southeast of the mine site, and it is thought to have received effluent from the John Bully Mine during operations.

### 3. SAMPLING APPROACH AND PROCEDURES

#### 3.1 OBJECTIVE

The objective of this QASP is to develop a standardized assessment process for legacy uranium mines that includes site reconnaissance and limited sampling that can be accomplished by a small work crew of three to five staff members in one work-day or less. The QASP includes direct observation, field measurements, soil and water sampling, and laboratory analyses to determine with high confidence if a release of hazardous substances has occurred at the mine site. Site-Specific procedures for the John Bully Uranium Mine are included in Appendix A. EPA and WESTON Standard Operating Procedures (SOPs) are provided as Appendix B.

#### 3.2 CRITERIA FOR OBSERVED RELEASE AND DATA QUALITY OBJECTIVES

The criteria against which each site will be evaluated are taken from the New Mexico Environmental Department (NMED) draft document “*Generic Field Investigation and Soil/Sediment Sampling Work Plan Guidance to Assess a Legacy Uranium Mine Site for An Observed Release*” dated July, 2011. That document describes the following three numerical criteria that define whether a hazardous substance is present and represents an observed release.

1. The on-site gamma count rate will be compared to the mean background gamma count rate to determine if the count rate is equal to or greater than two times the background mean.
2. Laboratory analyses of soil/sediment samples will be compared to the background isotopic concentrations to determine if the concentration is equal to or greater than three times the background mean.
3. Laboratory analyses of soil/sediment samples will be compared to the background isotopic concentrations to determine if the concentration is equal to or greater than two standard deviations above the background mean.

An observed release is part of the Site Investigation strategy for computing a Hazardous Ranking System (HRS) under CERCLA which is the program administered primarily by the EPA for evaluation of sites for the Superfund NPL (“Guidance for Performing Site Inspections Under CERCLA, EPA/540-R-92-021”). For purposes of this QASP, the only radioisotopes of concern

related to Criteria 2 and 3 above are U-238 and Ra-226. The laboratory analyses will generate data for other radioisotopes (such as K-40) as a bi-product of the analyses, but these other isotopic data are not relevant to the project objectives and will not be evaluated or compared to any criteria because they are unrelated to uranium mine operations.

More detailed instructions as to how to apply these criteria are discussed in the sections below. However, these criteria are applied to individual measurements or laboratory analyses for each sampling/measurement point. If measurements or laboratory analyses exceed any of these criteria, the site is determined to demonstrate conditions of an “observed release” and is to be considered for further evaluation and possible follow-on action. The criteria are not based on risk or dose, nor are they based on the area size of the impacted soil.

The objective of soil sampling is to determine if a hazardous substance is present and represents an observed release. To accomplish this, data quality objectives (DQOs) been established and are included in Appendix C. The DQOs presented were developed using the seven-step process set out in the *EPA Guidance for Quality Assurance Project Plans: EPA QA/G-5*.

### **3.3 DETERMINATION OF BACKGROUND**

As stated above, the numerical criteria are relative to either the count rate or soil concentration at some level above the background mean. Therefore, it is critical to accurately identify the background mean for each property or mining claim site. Background radiation has many sources including cosmic, terrestrial, and man-made sources, all of which can contribute to the natural variability of the ambient gamma background count rate level. When considering the natural background concentration of various radioisotopes, uranium 238 (U-238) and its daughter products (particularly Ra-226) in equilibrium are commonly found in U.S. soils at concentrations ranging from about 0.5 to 1.5 pCi/g. However, since uranium mines are normally located in areas geologically enhanced in uranium, the background levels of U-238 and daughters near legacy uranium mines may be above these concentrations. Other radionuclides found in natural background include K-40 at concentrations ranging from 10 to 25 pCi/g; Th-232 and daughters ranging from 0.5 to 1.5 pCi/g; and Cs-137, a man-made radioisotope from nuclear weapons

testing, at about 0.5 pCi/g. Establishing background concentrations that describe a distribution of measurement data is necessary to identify and evaluate contributions attributable to legacy mines.

A site background location should have similar physical, chemical, geological, radiological, and biological characteristics as the legacy mine site if there were no impacts from uranium mining or milling at the site. For purposes of this QASP, the background for each legacy mine site is determined following guidance provided by the HRS protocol. The HRS protocol determines the background for the individual site as the mean of field measurements and laboratory analyses of samples collected from four locations at the perimeter of the property corresponding to the four directions of a compass (N, S, E, and W). After locating the four background locations at the perimeter of the mining claim (or at the boundary of the property), each location should be gamma-scanned (the technique of gamma scanning is described in a following section) to verify that the area appears to have a homogenous gamma ambient level, and a visual confirmation that the other four characteristics listed above appear satisfied. Note that the gamma-scan data (count rate and location) should be saved for data validation and quality control purposes.

At each background location, a 1-minute stationary gamma count rate measurement will be collected with the detector held approximately 15 inches above the ground surface. The count rate and location, as recorded by GPS, will be saved, and the mean calculated from these four measurements. At each background location, a soil sample will be collected for radiochemical and stable chemical analyses. A sample of approximately 6-inch depth and 1 kg mass will be collected in a zip lock plastic bag. Rocks of greater than approximately 0.25-inch diameter should be discarded, as should any biological material such as grass or twigs. Samples should be analyzed by gamma spectrometry for all detectable radioisotopes by this method, and by alpha spectrometry for isotopes of the U-238 and Th-232 decay chains. The suite of metal analytes to be analyzed in each soil sample include the 23 Target Analyte List (TAL) metals: aluminum, tin, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, selenium, silver, thallium, vanadium, zinc, and mercury, plus two

additional metals total uranium and molybdenum. Additional information and specific analytical techniques are discussed in a subsequent section.

### **3.4 DIRECT OBSERVATION**

An observed release means that hazardous substances have been documented on the mine site or surrounding area soil or water, and that the substances are attributable, at least in part, to the site that is being evaluated. An observed release can be established by direct observation if hazardous substances such as mine ore and/or waste rock that are geologically foreign and mineralogically distinct from the native surface soil and rock composition on the surface of the mine property are present. An observed release can also be established by observation of ore or waste rock transported off-site by wind or water erosion, particularly into nearby drainage channels. Determination of mine surface or off-site contamination by direct observation should be documented by photographs and logbook entries that clearly demonstrate that the site remains impacted by prior mining activities. Determination by direct observation does not quantitatively demonstrate that the numerical criteria have been exceeded, but it is highly likely that subsequent stationary gamma measurements and soil sampling in the areas noted by direct observation will conclusively demonstrate conditions of “observed release.”

### **3.5 GAMMA SCANNING**

Like direct observation, scanning does not provide a quantitative assessment of site conditions but is an excellent tool to assess the relative gamma activity of the area. Scanning is useful in quickly determining the general radiological condition of the site and determining where background radiological conditions exist. It literally paints a picture that depicts where areas of elevated gamma activity are present and identifies where additional measurements and sampling efforts should be placed.

Gamma scanning will be conducted using a 2x2 NaI detector in conjunction with a GPS unit. The detector will be mounted on a cart or hand-held approximately 15 inches above the soil surface. The instrument will be set with an “open window to allow detection of the broad spectrum of gamma energies associated with the naturally occurring radionuclides. The technician will walk



transects at approximately 0.5 meter per second from one end of the mine claim boundary to another. One-second measurements of gamma activity are recorded and electronically attached to the appropriate GPS designation for subsequent plotting and depiction of ambient gamma activity. The field-of-view for this detector system is approximately 1 meter wide perpendicular to the direction of the travel. To attain 100% coverage of the property, and assuming a walking speed of 0.5 m/s and transect spacing of 1 m, the technician can gamma-scan approximately 0.45 acre/hour. If transect spacing is increased to 5 meters, the coverage drops to 20%, and the technician can gamma-scan approximately 2.2 acres/hour. Increasing the transect spacing farther to 10 meters, the coverage drops to 10% and the technician can gamma-scan 4.4 acres/hour. It is expected that these transects can be completed by mid-day during the survey, and the scanning data plotted to identify areas with elevated gamma activity for additional study. Based on these survey speeds, if the mine property area is less than 2 acres, it is suggested that 100% coverage be attempted. If the property is between 2 and 7 acres, 20% coverage should be attempted, and if between 7 and 15 acres in size, 10% coverage should be attempted. If the site has an area of greater than 15 acres, 10% coverage should be attempted and multiple monitoring teams with instrument sets should be employed.

In addition to walking the transects, the technician should visually watch for suspect areas such as waste rock or ore piles, mine portals (adits, shafts, vents, bore holes) machinery, building foundations, haul roads, arroyos, stream beds, or surface impoundments to gamma-scan. The technician should use the audio signal from the instrument system to help guide him to areas of elevated gamma activity. If there are many suspect areas needing to be gamma-scanned, a second gamma-scanning system should be employed to help with the survey load.

Data are recorded and plotted in units of gamma counts per minute (CPM). However, the data are collected in counts per second and then multiplied by 60 seconds/minute to arrive at CPM. Therefore, any slight variation in the collected count rate is magnified by this multiplication. For this reason, it is not unusual for isolated measurements to be significantly elevated above background. These isolated measurements are usually statistical outliers and are not indicative of actual elevated gamma activity. However, any significantly elevated gamma measurements

(greater than 2x background) should be re-investigated, particularly if there is a locus of elevated measurements around a common point.

Because of this statistical variation, these gamma-scanning data are not used for comparison to the observed release criteria for gamma measurements. These data are useful to identify areas where soil samples should be collected and stationary gamma measurements made.

### **3.6 STATIONARY GAMMA MEASUREMENTS**

Stationary 1-minute gamma measurements will be collected at grid points across the property, and at additional suspect locations identified by the gamma-scanning data. Because these stationary measurements are integrated over 1 minute intervals versus 1 second intervals for the scanning measurements, the stationary measurements will be a more accurate measurement of the ambient gamma activity at that point. Stationary measurements will be made with the same type of instrumentation, and at the same height above ground surface, as the gamma-scanning measurements. The instrument set will again be a 2x2 NaI detector coupled to a GPS system, operated in the “open window” mode, and held at about 15 inches above the ground surface.

Grid spacing will be determined by the area size of the mine site and should generally incorporate between 40 and 80 evenly spaced locations across the property. Assuming a 50-foot rectangular spacing, each acre would generate approximately 17 grid points, whereas with a 100-foot rectangular spacing, each acre would generate approximately 4 grid points. Therefore, a 5-acre site with 50-foot rectangular spacing would generate approximately 85 grid points. Assuming 1 minute to collect the data plus 4 minutes of additional time to walk to the next grid point, 85 measurements would require approximately 7 hours to collect. Therefore, those data could be collected by one person in one work-day. Spacing can be determined by stepping off the distances and determining the direction using a compass. Each measurement location will be documented by establishing the GPS coordinates using an appropriate electronic device. Grid spacing for mine sites of other area size will be calculated in a similar manner.

In addition to the grid locations, stationary 1-minute measurements will be collected at suspect areas as identified by Direct Observation of the site or by Gamma-Scanning. These

measurements will again be collected using the same instrument and GPS system. It is presumed that a second instrument set will be required for these measurements at suspect areas.

Interpretation of these data compares each count rate measurement, collected either from grid points or suspect areas, with the mean gamma background count rate measurement. If any count rate measurement is equal to or greater than two times (2X) the mean background count rate, the property is identified as having an observed release. It is important to note that a property identified as having an observed release may require no further action eventually if, for instance, the majority of the property has levels equal to background. Clean-up levels for these sites are not established in the document, and the observed release criteria are not the cleanup criteria.

### **3.7 SOIL SAMPLING**

Soil samples of 0 to 6-inch depths and approximately 1 kg mass will be collected at locations identified by the stationary measurements as being suspect. It is recommended that the locations with the highest 1-minute stationary readings be the primary locations considered for sampling. It is expected that about 5 samples will be collected from a typical mine site. When a suspect location is selected for sampling based on the stationary measurement, the potential location will first be carefully examined both visually and by radiologically scanning to confirm that the site is free of nuggets of ore or waste rock, or other hot particles that can significantly impact analytical results. It is the intent of soil sample analyses to quantify the residual uranium concentration averaged over the entire 1 kg mass, and therefore a reasonably homogeneous sample is desired.

If the suspect area has a few obvious nuggets or hot spots of contamination that are not typical of a broad area being sampled and can be excised, remove the hot spots and re-survey the potential location. Document in the field log what the conditions were and the number of nuggets or hot spots removed. If the ambient gamma activity is still significantly elevated and the location is therefore a good candidate for sampling, continue with the collection of the soil sample at this location, and re-collect the 1-minute stationary measurement at the location. If removing the hot spots has also removed the elevated gamma activity, then another sampling spot should be selected. If the potential sample location is obviously composed of multiple nuggets or hot spots

that will likely be excluded when the sample is collected, the sample should not be collected, and another location should be selected for that sample. Again, any non-radioactive rocks of greater than 0.25-inch diameter, and any biological material should be removed from the sample, possibly by use of a sieve. Alternately, if nuggets of elevated radioactivity appear to be widespread and typical for the site, they may be included in the sample if the laboratory has a procedure for crushing and grinding the sample prior to homogenizing, and the laboratory is directed to do so.

## 4. LABORATORY ANALYSES

### 4.1 ANALYTICAL METHODS

All samples, from the background locations and the suspect locations, will be submitted to a qualified radiological laboratory for gamma spectrometry analyses. Sample preparation should include drying and homogenization of the entire 1 kg sample. The minimum gamma spectrometry aliquot size should be 0.5 kg. The laboratory will be requested to report all identifiable gamma emitting radioisotopes, and specifically the daughters of U-238, Ra-226, Th-232, and K-40. The requested sensitivity should be 0.1 pCi/g. The requested analytical procedure for Ra-226 should be by quantification of Bi-214 after an ingrowth period of at least 21 days. The suite of metal analytes to be analyzed in each soil sample include the 23 Target Analyte List (TAL) metals: aluminum, tin, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, selenium, silver, thallium, vanadium, zinc, and mercury, plus two additional metals, total uranium and molybdenum. Information regarding laboratory, analytical methods, container size, preservation techniques, and hold times is included in Table 4-1.

Since these samples are from legacy mine sites, it is assumed that the U-238 and Th-232 radioisotope decay chains will be in equilibrium. However, due to different solubilities of the chemical species found naturally in the environment, it is possible that the daughters may not be in equilibrium with the parents. Also, it is possible that mill tailings may have been returned to the mine site for storage and/or disposal. If this is the case, then the concentrations of the residual radioisotopes will not be in equilibrium. If it suspected that any sample may not be in equilibrium, or if verification of equilibrium is desired, then additional analyses for isotopic uranium and isotopic thorium by alpha spectrometry will be requested of the laboratory. Analytical sensitivity of 0.1 pCi/g and a minimum aliquot size of 10 g will be required. It is recommended that one laboratory be selected for both types of analyses.

## 4.2 DATA INTERPRETATION

Interpretation of these data compares analytical result of each sample with the background mean concentration. If any sample contains U-238 as determined by alpha spectrometry or Ra-226 as determined by gamma spectrometry at a concentration equal to or greater than three times (3x) the mean background concentration or at a concentration equal to or greater than two times (2x) the standard deviation above the mean concentration, the property will be identified as having an observed release. No other isotopic results will be compared to background concentrations. However, the project Certified Health Physicist (CHP) will review any analytical data for isotopes other than U-238 and Ra-226 for which the results appear to exceed the two previously described criteria.

**Table 4-1**  
**Requirements for Containers, Preservation Techniques,**  
**Sample Volumes, and Holding Times**  
**John Bully Uranium Mine**  
**Grants, McKinley County New Mexico**

Name	Analytical Methods	Container	Preservation	Minimum Sample Volume or Weight	Maximum Holding Time
TAL Metals plus total uranium, molybdenum, tin and mercury	SW846 6010/6020  SW846 7470/7471	Polyethylene (water), Glass (solid)	HNO <sub>3</sub> to pH<2 (water), 4°C	500 mL, 8oz	28 days for mercury 180 days all other metals
U-238, Ra-226	Gamma Spectrometry	Polyethylene (water), Glass (solid)	NA (soil/water)	1 gallon, 1 kg (32 oz)	6 months
Uranium/Thorium if determined in field	Alpha Spec ASTM 3972-90M	Polyethylene (water), Glass (solid)	HNO <sub>3</sub> to pH< 2 (water), NA (soil)	1 liter, 8 oz	6 months

Radiological methods to be conducted by Eberline Analytical, Oakridge, Tennessee.

TAL Metals analyzed by ALS Laboratories, Fort Collins, Colorado.

## **5. DATA VALIDATION**

### **5.1 FIELD INSTRUMENTS**

Each field instrument will be calibrated on an annual basis by a qualified and registered calibration vendor. Validation of field measurements will be accomplished by maintenance and review of daily background and source checks of the instrument sets. Prior to initiation of field activities, 20 one-minute background counts and 20 one-minute source check counts will be collected and a mean calculated. During field operations, a one-minute background count and one-minute source check count will be made at the start and end of each work day. If the individual one-minute count falls outside of the mean  $\pm 20\%$ , the instrument will not be used until evaluated by the project CHP. Individual control charts will be maintained for the background and source check on each instrument to monitor instrument performance for trends.

### **5.2 LABORATORY ANALYSES**

Analytical laboratory reports will be reviewed by a CHP to confirm compliance with the technical specifications and reasonableness of the analytical results. Technical specifications reviewed will be that the requested isotopes are reported, that the minimum sensitivity was attained and required 21 day in-growth time for Ra-226 was observed. The reasonableness of the data will be evaluated by review of the various gamma spectrometry results to determine if they are in equilibrium, if appropriate, and if the results are within the expected range of results.



## **6. WATER SAMPLING**

### **6.1 WATER SAMPLING PROCEDURE**

WESTON Standard Operating Procedures (SOPs) 1002-01 for Surface Water Sample Collection and 1002-02 for Groundwater Monitoring Well Sample Collection will be utilized if either groundwater or surface water is observed on or in the vicinity of the mine site. The specific sampling procedures are described below.

### **6.2 GROUNDWATER PATHWAY SAMPLING**

An attempt will be made to collect groundwater samples from any groundwater monitoring wells or home/ stock water supply wells that exist either on-site or within 1,000 meters of the nearest property boundary. Survey personnel will measure depth to groundwater in each of the wells and then follow the EPA Guidance for Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures (Appendix B) for sampling the wells, if appropriate. Readings for temperature, pH, and conductivity will be collected every 5 minutes. Once three consecutive readings stabilize for pH (+ 0.5 units), conductivity (+ 10%  $\mu\text{mhos/cm}$ ), and temperature (+ 1°C), or the water has purged for a maximum of 30 minutes, the samples will be collected. The groundwater samples will be analyzed for the same list of radionuclides and TAL metals as were identified for soil samples.

### **6.3 SURFACE WATER PATHWAY SAMPLING**

An attempt will be made to collect a surface water sample and a sediment sample from any existing surface water impoundments, streams, or stock ponds that exist either on-site or within 1,000 meters of the nearest property boundary to document a release to the surface water pathway from the site. Samples will be analyzed for the same list of radionuclides and TAL metals as were identified for soil samples.

## **7. QUALITY ASSURANCE**

Quality assurance will be conducted in accordance with the WESTON Corporate Quality Management Manual, dated March 2004; the WESTON START-3 Quality Management Plan, dated August 2007; and EPA Quality Assurance/Quality Control Guidance for Removal Activities, dated April 1990. Following receipt of the TDD from EPA, a Quality Control (QC) officer will be assigned and will monitor work conducted throughout the entire project including reviewing interim report deliverables and field audits. The START-3 PTL will be responsible for QA/QC of the field investigation activities. The designated laboratory utilized during the investigation will be responsible for QA/QC related to the analytical work. START-3 will also collect samples to verify that laboratory QA/QC is consistent with the required standards and to validate the laboratory data received.

### **7.1 SAMPLE CUSTODY PROCEDURES**

Because of the evidentiary nature of sample collection, the possession of samples must be traceable from the time the samples are collected until they are introduced as evidence in legal proceedings. After sample collection and identification, samples will be maintained under chain-of-custody (COC) procedures. If the sample collected is to be split (laboratory QC), the sample will be allocated into similar sample containers. Sample labels completed with the same information as that on the original sample container will be attached to each of the split samples. All personnel required to package and ship coolers containing potentially hazardous material will be trained accordingly.

START-3 personnel will prepare and complete chain-of-custody forms using the Scribe Environmental Sampling Data Management System (SCRIBE) for all samples sent to a START-3 designated off-site laboratory. The chain-of-custody procedures are documented and will be made available to all personnel involved with the sampling. A typical chain-of-custody record will be completed each time a sample or group of samples is prepared for shipment to the laboratory. The record will repeat the information on each sample label and will serve as documentation of handling during shipment. A copy of this record will remain with the shipped

samples at all times, and another copy will be retained by the member of the sampling team who originally relinquished the samples. At the completion of the project, the data manager will export the SCRIBE chain-of-custody documentation to the Analytical Service Tracking System (ANSETS) database.

Samples relinquished to the participating laboratories will be subject to the following procedures for transfer of custody and shipment:

- Samples will be accompanied by the COC record. When transferring possession of samples, the individuals relinquishing and receiving the samples will sign, date, and note the time of the sample transfer on the record. This custody records document transfer of sample custody from the sampler to another person or to the laboratory.
- Samples will be properly packed for shipment and dispatched to the appropriate laboratory for analysis with separate, signed custody records enclosed in each sample box or cooler. Sample shipping containers will be custody-sealed for shipment to the laboratory. The preferred procedure includes use of a custody seal wrapped across filament tape that is wrapped around the package at least twice. The custody seal will then be folded over and stuck to seal to ensure that the only access to the package is by cutting the filament tape or breaking the seal to unwrap the tape.
- If sent by common carrier, a bill of lading or airbill will be used. Bill of lading and airbill receipts will be retained in the project file as part of the permanent documentation of sample shipping and transfer.

SOPs 1101.01 and 1102.01 describe these procedures in more detail.

## **7.2 PROJECT DOCUMENTATION**

All documents will be completed legibly and in ink and by entry into field logbooks, Response Manager, or SCRIBE. Response Manager is the Enterprise Data Collection System designed to provide near real-time access to non-analytical data normally collected in logbooks. Response Manager provides a standard data collection interface for modules of data normally collected by START-3 field personnel while on-site. These modules fall into two basic categories for Response and Removal. The modules include Emergency Response, Reconnaissance, Facility Assessment, Shipping, Containers, Materials, Calls, HHW, and General/Site Specific data. The system provides users with a standard template for laptop/desktop/tablet PCs that will synchronize to the secure web interface using merge replication technology to provide access to

field collected data via on the RRC-EDMS EPA Web Hub. Response Manager also includes a PDA application that provides some of the standard data entry templates from Response Manager to users on for field data entry. Response Manager also includes an integrated GPS unit with the secure PDA application, and the coordinates collected in Response Manager are automatically mapped on the RRC-EDMS interactive mapping site. GIS personnel can then access this data to provide comprehensive site maps for decision-making support.

Response Manager also includes an Analytical Module that is designed to give SCRIBE users the ability to synchronize the SCRIBE field data to the RRC-EDMS Web Hub. This allows analytical data managers and data validators access to data to perform reviews from anywhere with an Internet connection. The Analytical Module is designed to take the analytical data entered into EPA SCRIBE software and make it available for multiple users to access on one site. START-3 personnel will utilize SCRIBE for all data entry on-site and will upload to the Response Manager Analytical module.

### **7.2.1 Field Documentation**

The following field documentation will be maintained as described below.

#### **Field Logbook**

The field logbook is a descriptive notebook detailing site activities and observations so that an accurate, factual account of field procedures may be reconstructed. All entries will be signed by the individuals making them. Entries should include, at a minimum, the following:

- Site name and project number.
- Names of personnel on-site.
- Dates and times of all entries.
- Description of all site activities, including site entry and exit times.
- Noteworthy events and discussions.
- Weather conditions.
- Site observations.
- Identification and description of samples and locations.
- Subcontractor information and names of on-site personnel.
- Dates and times of sample collections and chain-of-custody information.
- Records of photographs.

- Site sketches.
- Calibration results.

### **Sample Labels**

Sample labels will be securely affixed to the sample container. The labels will clearly identify the particular sample and include the following information:

- Site name and project number.
- Date and time the sample was collected.
- Sample preservation method.
- Analysis requested.
- Sampling location.

### **Chain-of-Custody Record**

A chain-of-custody will be maintained from the time of sample collection until final deposition. Every transfer of custody will be noted and signed for and a copy of the record will be kept by each individual who has signed it. The chain-of-custody is discussed in Subsection 7.1 Sample Custody Procedures.

### **Custody Seal**

Custody seals demonstrate that a sample container has not been tampered with or opened. The individual who has custody of the samples will sign and date the seal and affix it to the container in such a manner that it cannot be opened without breaking the seal.

### **Photographic Documentation**

START-3 will take photographs to document site conditions and activities as site work progresses. Initial conditions should be well documented by photographing features that define the site-related contamination or special working conditions. Representative photographs should be taken of each type of site activity. The photographs should show typical operations and operating conditions as well as special situations and conditions that may arise during site activities. Site final conditions should also be documented as a record of how the site appeared at completion of the work.

All photographs should be taken with either a film camera or digital camera capable of recording the date on the image. Each photograph will be recorded in the logbook and within Response Manager with the location of the photographer, direction the photograph was taken, the subject of the photograph, and its significance (i.e., why the picture was taken). Where appropriate, the photograph location, direction, and subject will also be shown on a site sketch and recorded within Response Manager.

### **7.2.2 Report Preparation**

At the completion of the project, START-3 will review and validate all laboratory data and prepare a draft report of field activities and analytical results for EPA OSC review. Draft deliverable documents will be uploaded to the EPA TeamLink website for EPA OSC review and comment.

### **7.2.3 Response Manager**

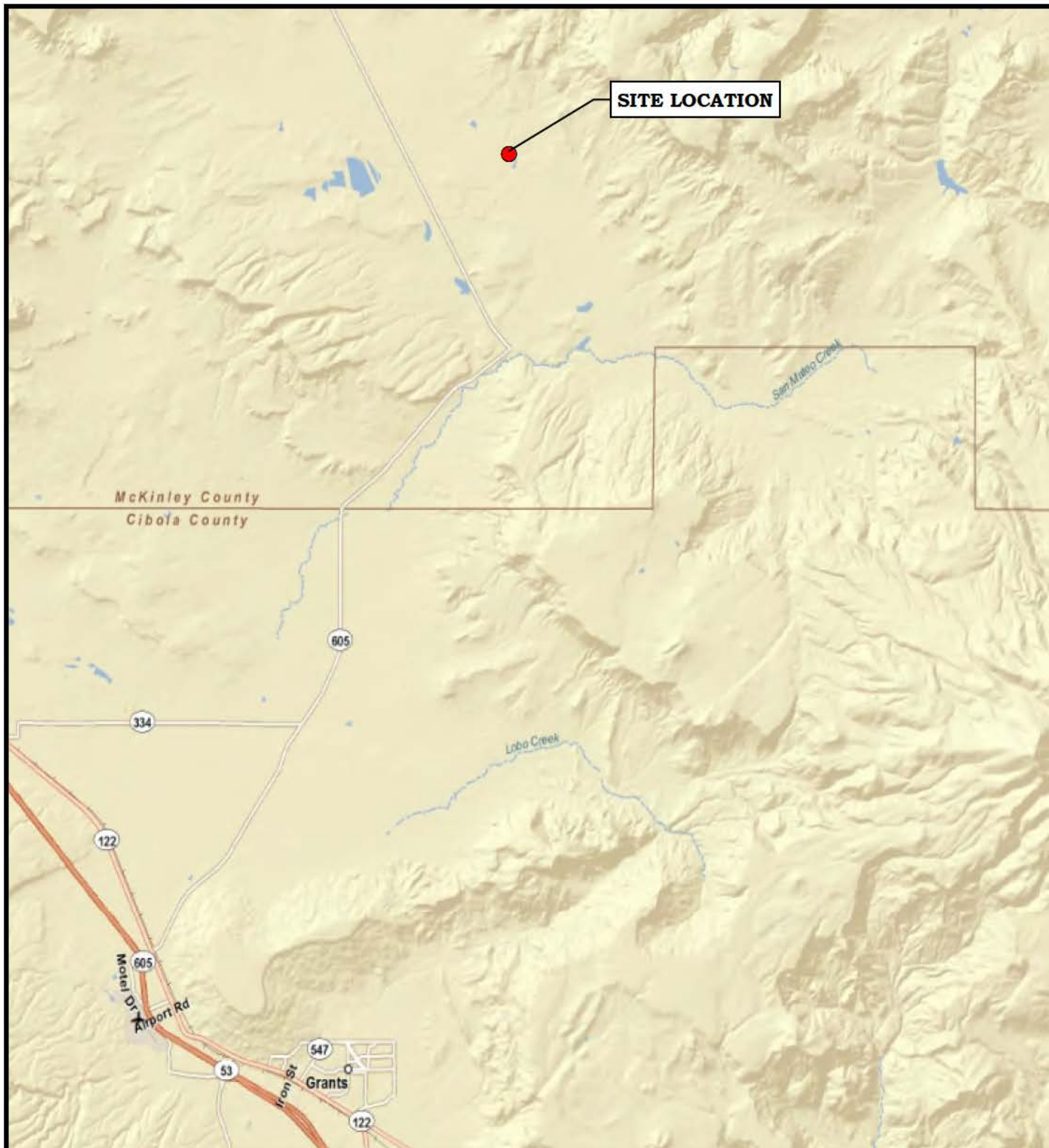
START-3 will use the Response Manager module located on the EPA Web Hub, <https://solutions.westonproject.net/epawebhub/>, to collect and organize the data collected from project activities. The information to be included encompasses some or all of the following depending on the specific project needs:

- General Module – Site specific data including location and type of site. It also includes an area for all key site locations including geo-spatial data associated with the key site locations.
- Emergency Response Module – includes the following sub-modules: Basic Info, HAZMAT, Release, Time Line Log, Incident Zones, Photos, Sensitive Receptors, Evacuations, Source, Cause, and Weather.
- Reconnaissance Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for targeted reconnaissance efforts. Typically the data in this module is associated with ESF-10 deployments and the clean-up of orphaned containers and hazardous debris, but the module can be utilized for any and all reconnaissance activities.
- Facility Assessment Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for assessments of structures. Typically utilized for EPA-regulated program facilities during an ESF-10 deployment of

resources. This module can be utilized to track the assessment of any facilities including multiple assessments of the fixed facilities.

- Shipping Module – provides standard templates for creating a cradle-to-grave record of all waste shipments from the site until they are recycled or destroyed. This includes the ability to capture manifest and manifest line items, and upload photos/original documents to support the records.
- Container Module – provides standard templates for cataloguing containers including HAZCAT and Layer information in each container. The module also allows for the tracking of which containers are bulked.
- Properties Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for collection of property data including access agreements and assessments of the property and current status of property with regards to the site removal action.
- Materials Module – provides standard templates for tracking materials that are brought on-site or that are removed from the site.
- Daily Reports – provides standard templates for tracking daily site activities, daily site personnel, and daily site notes for reporting back to the EPA OSC in a POLREP or SITREP.
- HHW Module – provides standard templates with the flexibility of adding any additional questions of values to the drop-down lists for tracking the amount of HHW collected at individual collection stations by HHW type.
- Data Files – data files can be uploaded in the photo module section and be associated with individual records or with the site in general. The meta data associated with that data file can be filled in using the photo log fields.

The data stored in the Response Manager database can be viewed and edited by any individual with access rights to those functions. At anytime deemed necessary, POLREPs and/or SITREPs can be generated by exporting the data out of Response Manager into Microsoft Excel/Word. The database is stored on a secure server and backed up regularly.



0 2.5 5  
SCALE IN MILES

**LEGEND**

● JOHN BULLY MINE LOCATION



**US EPA REGION 6  
START- 3**

**FIGURE 1-1  
SITE LOCATION MAP  
JOHN BULLY MINE SITE  
AMBROSIA LAKE AREA  
MCKINLEY COUNTY, NEW MEXICO**

TDD NO: TO-0035-11-06-03  
CERCLIS NO.: NMN000607164

SOURCE: ESRI STREETMAP USA

DATE  
SEPT 2011

PROJECT NO  
20406.012.035.0645.01

SCALE  
AS SHOWN



## **APPENDIX A**

### **SITE-SPECIFIC PROCEDURES FOR THE JOHN BULLY URANIUM MINE**

## **Specific Procedures for John Bully Uranium Mine**

**August 2011**

The following sections provide descriptions of the monitoring and sampling parameters for the John Bully Uranium Mine applying the guidance provided in the QASP and considering the conditions at the site.

### **1. John Bully Mine**

This is a 4- acre mine site with possible dewatering of the mine during operations into a nearby arroyo and a stock watering tank called the Voght Tank.

Scanning: Use transect spacing of 5 meters, resulting in 20% coverage. A 4 acre mine area will require 2-3 hours to complete. Also scan an arroyo located approximately 100 m distance from the site which leads to the Voght tank, and scan the perimeter of the tank.

Stationary measurements: Using 50 foot centers should generate about 70 stationary measurement points, which will require about 6 hours to collect. Collect additional measurements from the arroyo, and near the Voght tank.

Soil samples: Collect up to 10 soil samples from the site and at least one from the arroyo.

Water: Collect water samples from the Voght tank and from the arroyo, if water is available and access granted.

## **APPENDIX B**

### **EPA GUIDANCE DOCUMENTS AND WESTON STANDARD OPERATING PROCEDURES**



# Ground Water Issue

## LOW-FLOW (MINIMAL DRAWDOWN) GROUND-WATER SAMPLING PROCEDURES

by Robert W. Puls<sup>1</sup> and Michael J. Barcelona<sup>2</sup>

### Background

The Regional Superfund Ground Water Forum is a group of ground-water scientists, representing EPA's Regional Superfund Offices, organized to exchange information related to ground-water remediation at Superfund sites. One of the major concerns of the Forum is the sampling of ground water to support site assessment and remedial performance monitoring objectives. This paper is intended to provide background information on the development of low-flow sampling procedures and its application under a variety of hydrogeologic settings. It is hoped that the paper will support the production of standard operating procedures for use by EPA Regional personnel and other environmental professionals engaged in ground-water sampling.

For further information contact: Robert Puls, 405-436-8543, Subsurface Remediation and Protection Division, NRMRL, Ada, Oklahoma.

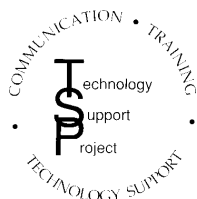
### I. Introduction

The methods and objectives of ground-water sampling to assess water quality have evolved over time. Initially the emphasis was on the assessment of water quality of aquifers as sources of drinking water. Large water-bearing

units were identified and sampled in keeping with that objective. These were highly productive aquifers that supplied drinking water via private wells or through public water supply systems. Gradually, with the increasing awareness of subsurface pollution of these water resources, the understanding of complex hydrogeochemical processes which govern the fate and transport of contaminants in the subsurface increased. This increase in understanding was also due to advances in a number of scientific disciplines and improvements in tools used for site characterization and ground-water sampling. Ground-water quality investigations where pollution was detected initially borrowed ideas, methods, and materials for site characterization from the water supply field and water analysis from public health practices. This included the materials and manner in which monitoring wells were installed and the way in which water was brought to the surface, treated, preserved and analyzed. The prevailing conceptual ideas included convenient generalizations of ground-water resources in terms of large and relatively homogeneous hydrologic *units*. With time it became apparent that conventional water supply generalizations of *homogeneity* did not adequately represent field data regarding pollution of these subsurface resources. The important role of *heterogeneity* became increasingly clear not only in geologic terms, but also in terms of complex physical,

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Director

chemical and biological subsurface processes. With greater appreciation of the role of heterogeneity, it became evident that subsurface pollution was ubiquitous and encompassed the unsaturated zone to the deep subsurface and included unconsolidated sediments, fractured rock, and *aquifers* or low-yielding or impermeable formations. Small-scale processes and heterogeneities were shown to be important in identifying contaminant distributions and in controlling water and contaminant flow paths.

It is beyond the scope of this paper to summarize all the advances in the field of ground-water quality investigations and remediation, but two particular issues have bearing on ground-water sampling today: aquifer heterogeneity and colloidal transport. Aquifer heterogeneities affect contaminant flow paths and include variations in geology, geochemistry, hydrology and microbiology. As methods and the tools available for subsurface investigations have become increasingly sophisticated and understanding of the subsurface environment has advanced, there is an awareness that in most cases a primary concern for site investigations is characterization of contaminant flow paths rather than entire aquifers. In fact, in many cases, plume thickness can be less than well screen lengths (e.g., 3-6 m) typically installed at hazardous waste sites to detect and monitor plume movement over time. Small-scale differences have increasingly been shown to be important and there is a general trend toward smaller diameter wells and shorter screens.

The hydrogeochemical significance of colloidal-size particles in subsurface systems has been realized during the past several years (Gschwend and Reynolds, 1987; McCarthy and Zachara, 1989; Puls, 1990; Ryan and Gschwend, 1990). This realization resulted from both field and laboratory studies that showed faster contaminant migration over greater distances and at higher concentrations than flow and transport model predictions would suggest (Buddemeier and Hunt, 1988; Enfield and Bengtsson, 1988; Penrose et al., 1990). Such models typically account for interaction between the mobile aqueous and immobile solid phases, but do not allow for a mobile, reactive solid phase. It is recognition of this third *phase* as a possible means of contaminant transport that has brought increasing attention to the manner in which samples are collected and processed for analysis (Puls et al., 1990; McCarthy and Degueudre, 1993; Backhus et al., 1993; U. S. EPA, 1995). If such a phase is present in sufficient mass, possesses high sorption reactivity, large surface area, and remains stable in suspension, it can serve as an important mechanism to facilitate contaminant transport in many types of subsurface systems.

Colloids are particles that are sufficiently small so that the surface free energy of the particle dominates the bulk free energy. Typically, in ground water, this includes particles with diameters between 1 and 1000 nm. The most commonly observed mobile particles include: secondary clay minerals; hydrous iron, aluminum, and manganese oxides; dissolved and particulate organic materials, and viruses and bacteria.

These reactive particles have been shown to be mobile under a variety of conditions in both field studies and laboratory column experiments, and as such need to be included in monitoring programs where identification of the *total* mobile contaminant loading (dissolved + naturally suspended particles) at a site is an objective. To that end, sampling methodologies must be used which do not artificially bias *naturally* suspended particle concentrations.

Currently the most common ground-water purging and sampling methodology is to purge a well using bailers or high speed pumps to remove 3 to 5 casing volumes followed by sample collection. This method can cause adverse impacts on sample quality through collection of samples with high levels of turbidity. This results in the inclusion of otherwise immobile artifactual particles which produce an overestimation of certain analytes of interest (e.g., metals or hydrophobic organic compounds). Numerous documented problems associated with filtration (Danielsson, 1982; Laxen and Chandler, 1982; Horowitz et al., 1992) make this an undesirable method of rectifying the turbidity problem, and include the removal of potentially mobile (contaminant-associated) particles during filtration, thus artificially biasing contaminant concentrations low. Sampling-induced turbidity problems can often be mitigated by using low-flow purging and sampling techniques.

Current subsurface conceptual models have undergone considerable refinement due to the recent development and increased use of field screening tools. So-called hydraulic *push* technologies (e.g., cone penetrometer, Geoprobe®, QED HydroPunch®) enable relatively fast screening site characterization which can then be used to design and install a monitoring well network. Indeed, alternatives to conventional monitoring wells are now being considered for some hydrogeologic settings. The ultimate design of any monitoring system should however be based upon adequate site characterization and be consistent with established monitoring objectives.

If the sampling program objectives include accurate assessment of the magnitude and extent of subsurface contamination over time and/or accurate assessment of subsequent remedial performance, then some information regarding plume delineation in three-dimensional space is necessary prior to monitoring well network design and installation. This can be accomplished with a variety of different tools and equipment ranging from hand-operated augers to screening tools mentioned above and large drilling rigs. Detailed information on ground-water flow velocity, direction, and horizontal and vertical variability are essential baseline data requirements. Detailed soil and geologic data are required prior to and during the installation of sampling points. This includes historical as well as detailed soil and geologic logs which accumulate during the site investigation. The use of borehole geophysical techniques is also recommended. With this information (together with other site characterization data) and a clear understanding of sampling

objectives, then appropriate location, screen length, well diameter, slot size, etc. for the monitoring well network can be decided. This is especially critical for new in situ remedial approaches or natural attenuation assessments at hazardous waste sites.

In general, the overall goal of any ground-water sampling program is to collect water samples with no alteration in water chemistry; analytical data thus obtained may be used for a variety of specific monitoring programs depending on the regulatory requirements. The sampling methodology described in this paper assumes that the monitoring goal is to sample monitoring wells for the presence of contaminants and it is applicable whether mobile colloids are a concern or not and whether the analytes of concern are metals (and metal-oids) or organic compounds.

## II. Monitoring Objectives and Design Considerations

The following issues are important to consider prior to the design and implementation of any ground-water monitoring program, including those which anticipate using low-flow purging and sampling procedures.

### A. Data Quality Objectives (DQOs)

Monitoring objectives include four main types: detection, assessment, corrective-action evaluation and resource evaluation, along with *hybrid* variations such as site-assessments for property transfers and water availability investigations. Monitoring objectives may change as contamination or water quality problems are discovered. However, there are a number of common components of monitoring programs which should be recognized as important regardless of initial objectives. These components include:

- 1) Development of a conceptual model that incorporates elements of the regional geology to the local geologic framework. The conceptual model development also includes initial site characterization efforts to identify hydrostratigraphic units and likely flow-paths using a minimum number of borings and well completions;
- 2) Cost-effective and well documented collection of high quality data utilizing simple, accurate, and reproducible techniques; and
- 3) Refinement of the conceptual model based on supplementary data collection and analysis.

These fundamental components serve many types of monitoring programs and provide a basis for future efforts that evolve in complexity and level of spatial detail as purposes and objectives expand. High quality, reproducible data collection is a common goal regardless of program objectives.

High quality data collection implies data of sufficient accuracy, precision, and completeness (i.e., ratio of valid analytical results to the minimum sample number called for by the program design) to meet the program objectives. Accuracy depends on the correct choice of monitoring tools and procedures to minimize sample and subsurface disturbance from collection to analysis. Precision depends on the repeatability of sampling and analytical protocols. It can be assured or improved by replication of sample analyses including blanks, field/lab standards and reference standards.

### B. Sample Representativeness

An important goal of any monitoring program is collection of data that is truly representative of conditions at the site. The term *representativeness* applies to chemical and hydrogeologic data collected via wells, borings, piezometers, geophysical and soil gas measurements, lysimeters, and temporary sampling points. It involves a recognition of the statistical variability of individual subsurface physical properties, and contaminant or major ion concentration levels, while explaining extreme values. Subsurface temporal and spatial variability are facts. Good professional practice seeks to maximize representativeness by using proven accurate and reproducible techniques to define limits on the distribution of measurements collected at a site. However, measures of representativeness are dynamic and are controlled by evolving site characterization and monitoring objectives. An evolutionary site characterization model, as shown in Figure 1, provides a systematic approach to the goal of consistent data collection.

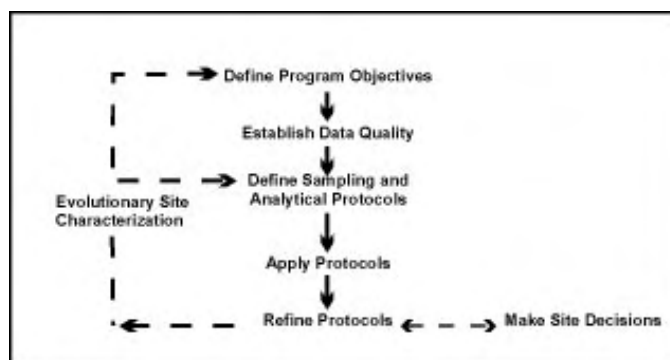


Figure 1. Evolutionary Site Characterization Model

The model emphasizes a recognition of the causes of the variability (e.g., use of inappropriate technology such as using bailers to purge wells; imprecise or operator-dependent methods) and the need to control avoidable errors.

## 1) Questions of Scale

A sampling plan designed to collect representative samples must take into account the potential scale of changes in site conditions through space and time as well as the chemical associations and behavior of the parameters that are targeted for investigation. In subsurface systems, physical (i.e., aquifer) and chemical properties over time or space are not statistically independent. In fact, samples taken in close proximity (i.e., within distances of a few meters) or within short time periods (i.e., more frequently than monthly) are highly auto-correlated. This means that designs employing high-sampling frequency (e.g., monthly) or dense spatial monitoring designs run the risk of redundant data collection and misleading inferences regarding trends in values that aren't statistically valid. In practice, contaminant detection and assessment monitoring programs rarely suffer these *over-sampling* concerns. In corrective-action evaluation programs, it is also possible that too little data may be collected over space or time. In these cases, false interpretation of the spatial extent of contamination or underestimation of temporal concentration variability may result.

## 2) Target Parameters

Parameter selection in monitoring program design is most often dictated by the regulatory status of the site. However, background water quality constituents, purging indicator parameters, and contaminants, all represent targets for data collection programs. The tools and procedures used in these programs should be equally rigorous and applicable to all categories of data, since all may be needed to determine or support regulatory action.

### C. Sampling Point Design and Construction

Detailed site characterization is central to all decision-making purposes and the basis for this characterization resides in identification of the geologic framework and major hydro-stratigraphic units. Fundamental data for sample point location include: subsurface lithology, head-differences and background geochemical conditions. Each sampling point has a proper use or uses which should be documented at a level which is appropriate for the program's data quality objectives. Individual sampling points may not always be able to fulfill multiple monitoring objectives (e.g., detection, assessment, corrective action).

#### 1) Compatibility with Monitoring Program and Data Quality Objectives

Specifics of sampling point location and design will be dictated by the complexity of subsurface lithology and variability in contaminant and/or geochemical conditions. It should be noted that, regardless of the ground-water sampling approach, few sampling points (e.g., wells, drive-points, screened augers) have zones of influence in excess of a few

feet. Therefore, the spatial frequency of sampling points should be carefully selected and designed.

## 2) Flexibility of Sampling Point Design

In most cases *well-point* diameters in excess of 1 7/8 inches will permit the use of most types of submersible pumping devices for low-flow (minimal drawdown) sampling. It is suggested that *short* (e.g., less than 1.6 m) screens be incorporated into the monitoring design where possible so that comparable results from one device to another might be expected. *Short*, of course, is relative to the degree of vertical water quality variability expected at a site.

## 3) Equilibration of Sampling Point

Time should be allowed for equilibration of the well or sampling point with the formation after installation. Placement of well or sampling points in the subsurface produces some disturbance of ambient conditions. Drilling techniques (e.g., auger, rotary, etc.) are generally considered to cause more disturbance than *direct-push* technologies. In either case, there may be a period (i.e., days to months) during which water quality near the point may be distinctly different from that in the formation. Proper development of the sampling point and adjacent formation to remove fines created during emplacement will shorten this water quality *recovery* period.

### III. Definition of Low-Flow Purging and Sampling

It is generally accepted that water in the well casing is non-representative of the formation water and needs to be purged prior to collection of ground-water samples. However, the water in the screened interval may indeed be representative of the formation, depending upon well construction and site hydrogeology. Wells are purged to some extent for the following reasons: the presence of the air interface at the top of the water column resulting in an oxygen concentration gradient with depth, loss of volatiles up the water column, leaching from or sorption to the casing or filter pack, chemical changes due to clay seals or backfill, and surface infiltration.

Low-flow purging, whether using portable or dedicated systems, should be done using pump-intake located in the middle or slightly above the middle of the screened interval. Placement of the pump too close to the bottom of the well will cause increased entrainment of solids which have collected in the well over time. These particles are present as a result of well development, prior purging and sampling events, and natural colloidal transport and deposition. Therefore, placement of the pump in the middle or toward the top of the screened interval is suggested. Placement of the pump at the top of the water column for sampling is only recommended in unconfined aquifers, screened across the water table, where this is the desired sampling point. Low-

flow purging has the advantage of minimizing mixing between the overlying stagnant casing water and water within the screened interval.

### **A. Low-Flow Purging and Sampling**

Low-flow refers to the velocity with which water enters the pump intake and that is imparted to the formation pore water in the immediate vicinity of the well screen. It does not necessarily refer to the flow rate of water discharged at the surface which can be affected by flow regulators or restrictions. Water level drawdown provides the best indication of the stress imparted by a given flow-rate for a given hydrological situation. The objective is to pump in a manner that minimizes stress (drawdown) to the system to the extent practical taking into account established site sampling objectives. Typically, flow rates on the order of 0.1 - 0.5 L/min are used, however this is dependent on site-specific hydrogeology. Some extremely coarse-textured formations have been successfully sampled in this manner at flow rates to 1 L/min. The effectiveness of using low-flow purging is intimately linked with proper screen location, screen length, and well construction and development techniques. The reestablishment of natural flow paths in both the vertical and horizontal directions is important for correct interpretation of the data. For high resolution sampling needs, screens less than 1 m should be used. Most of the need for purging has been found to be due to passing the sampling device through the overlying casing water which causes mixing of these stagnant waters and the dynamic waters within the screened interval. Additionally, there is disturbance to suspended sediment collected in the bottom of the casing and the displacement of water out into the formation immediately adjacent to the well screen. These disturbances and impacts can be avoided using dedicated sampling equipment, which precludes the need to insert the sampling device prior to purging and sampling.

Isolation of the screened interval water from the overlying stagnant casing water may be accomplished using low-flow minimal drawdown techniques. If the pump intake is located within the screened interval, most of the water pumped will be drawn in directly from the formation with little mixing of casing water or disturbance to the sampling zone. However, if the wells are not constructed and developed properly, zones other than those intended may be sampled. At some sites where geologic heterogeneities are sufficiently different within the screened interval, higher conductivity zones may be preferentially sampled. This is another reason to use shorter screened intervals, especially where high spatial resolution is a sampling objective.

### **B. Water Quality Indicator Parameters**

It is recommended that water quality indicator parameters be used to determine purging needs prior to sample collection in each well. Stabilization of parameters such as pH, specific conductance, dissolved oxygen, oxida-

tion-reduction potential, temperature and turbidity should be used to determine when formation water is accessed during purging. In general, the order of stabilization is pH, temperature, and specific conductance, followed by oxidation-reduction potential, dissolved oxygen and turbidity. Temperature and pH, while commonly used as purging indicators, are actually quite insensitive in distinguishing between formation water and stagnant casing water; nevertheless, these are important parameters for data interpretation purposes and should also be measured. Performance criteria for determination of stabilization should be based on water-level drawdown, pumping rate and equipment specifications for measuring indicator parameters. Instruments are available which utilize in-line flow cells to continuously measure the above parameters.

It is important to establish specific well stabilization criteria and then consistently follow the same methods thereafter, particularly with respect to drawdown, flow rate and sampling device. Generally, the time or purge volume required for parameter stabilization is independent of well depth or well volumes. Dependent variables are well diameter, sampling device, hydrogeochemistry, pump flow rate, and whether the devices are used in a portable or dedicated manner. If the sampling device is already in place (i.e., dedicated sampling systems), then the time and purge volume needed for stabilization is much shorter. Other advantages of dedicated equipment include less purge water for waste disposal, much less decontamination of equipment, less time spent in preparation of sampling as well as time in the field, and more consistency in the sampling approach which probably will translate into less variability in sampling results. The use of dedicated equipment is strongly recommended at wells which will undergo routine sampling over time.

If parameter stabilization criteria are too stringent, then minor oscillations in indicator parameters may cause purging operations to become unnecessarily protracted. It should also be noted that turbidity is a very conservative parameter in terms of stabilization. Turbidity is always the last parameter to stabilize. Excessive purge times are invariably related to the establishment of too stringent turbidity stabilization criteria. It should be noted that natural turbidity levels in ground water may exceed 10 nephelometric turbidity units (NTU).

### **C. Advantages and Disadvantages of Low-Flow (Minimum Drawdown) Purging**

In general, the advantages of low-flow purging include:

- samples which are representative of the *mobile* load of contaminants present (dissolved and colloid-associated);
- minimal disturbance of the sampling point thereby minimizing sampling artifacts;
- less operator variability, greater operator control;



- reduced stress on the formation (minimal drawdown);
- less mixing of stagnant casing water with formation water;
- reduced need for filtration and, therefore, less time required for sampling;
- smaller purging volume which decreases waste disposal costs and sampling time;
- better sample consistency; reduced artificial sample variability.

Some disadvantages of low-flow purging are:

- higher initial capital costs,
- greater set-up time in the field,
- need to transport additional equipment to and from the site,
- increased training needs,
- resistance to change on the part of sampling practitioners,
- concern that new data will indicate a *change in conditions* and trigger an *action*.

#### IV. Low-Flow (Minimal Drawdown) Sampling Protocols

The following ground-water sampling procedure has evolved over many years of experience in ground-water sampling for organic and inorganic compound determinations and as such summarizes the authors' (and others) experiences to date (Barcelona et al., 1984, 1994; Barcelona and Helfrich, 1986; Puls and Barcelona, 1989; Puls et. al. 1990, 1992; Puls and Powell, 1992; Puls and Paul, 1995). High-quality chemical data collection is essential in ground-water monitoring and site characterization. The primary limitations to the collection of *representative* ground-water samples include: mixing of the stagnant casing and *fresh* screen waters during insertion of the sampling device or ground-water level measurement device; disturbance and resuspension of settled solids at the bottom of the well when using high pumping rates or raising and lowering a pump or bailer; introduction of atmospheric gases or degassing from the water during sample handling and transfer, or inappropriate use of vacuum sampling device, etc.

##### A. Sampling Recommendations

Water samples should not be taken immediately following well development. Sufficient time should be allowed for the ground-water flow regime in the vicinity of the monitoring well to stabilize and to approach chemical equilibrium with the well construction materials. This lag time will depend on site conditions and methods of installation but often exceeds one week.

Well purging is nearly always necessary to obtain samples of water flowing through the geologic formations in the screened interval. Rather than using a general but arbitrary guideline of purging three casing volumes prior to

sampling, it is recommended that an in-line water quality measurement device (e.g., flow-through cell) be used to establish the stabilization time for several parameters (e.g., pH, specific conductance, redox, dissolved oxygen, turbidity) on a well-specific basis. Data on pumping rate, drawdown, and volume required for parameter stabilization can be used as a guide for conducting subsequent sampling activities.

The following are recommendations to be considered before, during and after sampling:

- use low-flow rates (<0.5 L/min), during both purging and sampling to maintain minimal drawdown in the well;
- maximize tubing wall thickness, minimize tubing length;
- place the sampling device intake at the desired sampling point;
- minimize disturbances of the stagnant water column above the screened interval during water level measurement and sampling device insertion;
- make proper adjustments to stabilize the flow rate as soon as possible;
- monitor water quality indicators during purging;
- collect unfiltered samples to estimate contaminant loading and transport potential in the subsurface system.

##### B. Equipment Calibration

Prior to sampling, all sampling device and monitoring equipment should be calibrated according to manufacturer's recommendations and the site Quality Assurance Project Plan (QAPP) and Field Sampling Plan (FSP). Calibration of pH should be performed with at least two buffers which bracket the expected range. Dissolved oxygen calibration must be corrected for local barometric pressure readings and elevation.

##### C. Water Level Measurement and Monitoring

It is recommended that a device be used which will least disturb the water surface in the casing. Well depth should be obtained from the well logs. Measuring to the bottom of the well casing will only cause resuspension of settled solids from the formation and require longer purging times for turbidity equilibration. Measure well depth after sampling is completed. The water level measurement should be taken from a permanent reference point which is surveyed relative to ground elevation.

##### D. Pump Type

The use of low-flow (e.g., 0.1-0.5 L/min) pumps is suggested for purging and sampling all types of analytes. All pumps have some limitation and these should be investigated with respect to application at a particular site. Bailers are inappropriate devices for low-flow sampling.

## 1) General Considerations

There are no unusual requirements for ground-water sampling devices when using low-flow, minimal drawdown techniques. The major concern is that the device give consistent results and minimal disturbance of the sample across a range of *low* flow rates (i.e., < 0.5 L/min). Clearly, pumping rates that cause minimal to no drawdown in one well could easily cause *significant* drawdown in another well finished in a less transmissive formation. In this sense, the pump should not cause undue pressure or temperature changes or physical disturbance on the water sample over a reasonable sampling range. Consistency in operation is critical to meet accuracy and precision goals.

## 2) Advantages and Disadvantages of Sampling Devices

A variety of sampling devices are available for low-flow (minimal drawdown) purging and sampling and include peristaltic pumps, bladder pumps, electrical submersible pumps, and gas-driven pumps. Devices which lend themselves to both dedication and consistent operation at definable low-flow rates are preferred. It is desirable that the pump be easily adjustable and operate reliably at these lower flow rates. The peristaltic pump is limited to shallow applications and can cause degassing resulting in alteration of pH, alkalinity, and some volatiles loss. Gas-driven pumps should be of a type that does not allow the gas to be in direct contact with the sampled fluid.

Clearly, bailers and other *grab* type samplers are ill-suited for low-flow sampling since they will cause repeated disturbance and mixing of *stagnant* water in the casing and the *dynamic* water in the screened interval. Similarly, the use of inertial lift foot-valve type samplers may cause too much disturbance at the point of sampling. Use of these devices also tends to introduce uncontrolled and unacceptable operator variability.

Summaries of advantages and disadvantages of various sampling devices are listed in Herzog et al. (1991), U. S. EPA (1992), Parker (1994) and Thurnblad (1994).

### E. Pump Installation

Dedicated sampling devices (left in the well) capable of pumping and sampling are preferred over any other type of device. Any portable sampling device should be slowly and carefully lowered to the middle of the screened interval or slightly above the middle (e.g., 1-1.5 m below the top of a 3 m screen). This is to minimize excessive mixing of the stagnant water in the casing above the screen with the screened interval zone water, and to minimize resuspension of solids which will have collected at the bottom of the well. These two disturbance effects have been shown to directly affect the time required for purging. There also appears to be a direct correlation between size of portable sampling devices relative to the well bore and resulting purge volumes and times. The key is to minimize disturbance of water and solids in the well casing.

## F. Filtration

Decisions to filter samples should be dictated by sampling objectives rather than as a *fix* for poor sampling practices, and field-filtering of certain constituents should not be the default. Consideration should be given as to what the application of field-filtration is trying to accomplish. For assessment of truly dissolved (as opposed to operationally *dissolved* [i.e., samples filtered with 0.45 µm filters]) concentrations of major ions and trace metals, 0.1 µm filters are recommended although 0.45 µm filters are normally used for most regulatory programs. Alkalinity samples must also be filtered if significant particulate calcium carbonate is suspected, since this material is likely to impact alkalinity titration results (although filtration itself may alter the CO<sub>2</sub> composition of the sample and, therefore, affect the results).

Although filtration may be appropriate, filtration of a sample may cause a number of unintended changes to occur (e.g. oxidation, aeration) possibly leading to filtration-induced artifacts during sample analysis and uncertainty in the results. Some of these unintended changes may be unavoidable but the factors leading to them must be recognized. Deleterious effects can be minimized by consistent application of certain filtration guidelines. Guidelines should address selection of filter type, media, pore size, etc. in order to identify and minimize potential sources of uncertainty when filtering samples.

In-line filtration is recommended because it provides better consistency through less sample handling, and minimizes sample exposure to the atmosphere. In-line filters are available in both disposable (barrel filters) and non-disposable (in-line filter holder, flat membrane filters) formats and various filter pore sizes (0.1-5.0 µm). Disposable filter cartridges have the advantage of greater sediment handling capacity when compared to traditional membrane filters. Filters must be pre-rinsed following manufacturer's recommendations. If there are no recommendations for rinsing, pass through a minimum of 1 L of ground water following purging and prior to sampling. Once filtration has begun, a filter cake may develop as particles larger than the pore size accumulate on the filter membrane. The result is that the effective pore diameter of the membrane is reduced and particles smaller than the stated pore size are excluded from the filtrate. Possible corrective measures include prefiltering (with larger pore size filters), minimizing particle loads to begin with, and reducing sample volume.

### G. Monitoring of Water Level and Water Quality Indicator Parameters

Check water level periodically to monitor drawdown in the well as a guide to flow rate adjustment. The goal is minimal drawdown (<0.1 m) during purging. This goal may be difficult to achieve under some circumstances due to geologic heterogeneities within the screened interval, and may require adjustment based on site-specific conditions and personal experience. In-line water quality indicator parameters should be continuously monitored during purging. The water quality

indicator parameters monitored can include pH, redox potential, conductivity, dissolved oxygen (DO) and turbidity. The last three parameters are often most sensitive. Pumping rate, drawdown, and the time or volume required to obtain stabilization of parameter readings can be used as a future guide to purge the well. Measurements should be taken every three to five minutes if the above suggested rates are used. Stabilization is achieved after all parameters have stabilized for three successive readings. In lieu of measuring all five parameters, a minimum subset would include pH, conductivity, and turbidity or DO. Three successive readings should be within  $\pm 0.1$  for pH,  $\pm 3\%$  for conductivity,  $\pm 10$  mv for redox potential, and  $\pm 10\%$  for turbidity and DO. Stabilized purge indicator parameter trends are generally obvious and follow either an exponential or asymptotic change to stable values during purging. Dissolved oxygen and turbidity usually require the longest time for stabilization. The above stabilization guidelines are provided for rough estimates based on experience.

#### **H. Sampling, Sample Containers, Preservation and Decontamination**

Upon parameter stabilization, sampling can be initiated. If an in-line device is used to monitor water quality parameters, it should be disconnected or bypassed during sample collection. Sampling flow rate may remain at established purge rate or may be adjusted slightly to minimize aeration, bubble formation, turbulent filling of sample bottles, or loss of volatiles due to extended residence time in tubing. Typically, flow rates less than 0.5 L/min are appropriate. The same device should be used for sampling as was used for purging. Sampling should occur in a progression from least to most contaminated well, if this is known. Generally, volatile (e.g., solvents and fuel constituents) and gas sensitive (e.g.,  $\text{Fe}^{2+}$ ,  $\text{CH}_4$ ,  $\text{H}_2\text{S}/\text{HS}^-$ ; alkalinity) parameters should be sampled first. The sequence in which samples for most inorganic parameters are collected is immaterial unless filtered (dissolved) samples are desired. Filtering should be done last and in-line filters should be used as discussed above. During both well purging and sampling, proper protective clothing and equipment must be used based upon the type and level of contaminants present.

The appropriate sample container will be prepared in advance of actual sample collection for the analytes of interest and include sample preservative where necessary. Water samples should be collected directly into this container from the pump tubing.

Immediately after a sample bottle has been filled, it must be preserved as specified in the site (QAPP). Sample preservation requirements are based on the analyses being performed (use site QAPP, FSP, RCRA guidance document [U. S. EPA, 1992] or EPA SW-846 [U. S. EPA, 1982]). It may be advisable to add preservatives to sample bottles in a controlled setting prior to entering the field in order to reduce the chances of improperly preserving sample bottles or

introducing field contaminants into a sample bottle while adding the preservatives.

The preservatives should be transferred from the chemical bottle to the sample container using a disposable polyethylene pipet and the disposable pipet should be used only once and then discarded.

After a sample container has been filled with ground water, a Teflon™ (or tin)-lined cap is screwed on tightly to prevent the container from leaking. A sample label is filled out as specified in the FSP. The samples should be stored inverted at 4°C.

Specific decontamination protocols for sampling devices are dependent to some extent on the type of device used and the type of contaminants encountered. Refer to the site QAPP and FSP for specific requirements.

#### **I. Blanks**

The following blanks should be collected:

- (1) field blank: one field blank should be collected from each source water (distilled/deionized water) used for sampling equipment decontamination or for assisting well development procedures.
- (2) equipment blank: one equipment blank should be taken prior to the commencement of field work, from each set of sampling equipment to be used for that day. Refer to site QAPP or FSP for specific requirements.
- (3) trip blank: a trip blank is required to accompany each volatile sample shipment. These blanks are prepared in the laboratory by filling a 40-mL volatile organic analysis (VOA) bottle with distilled/deionized water.

#### **V. Low-Permeability Formations and Fractured Rock**

The overall sampling program goals or sampling objectives will drive how the sampling points are located, installed, and choice of sampling device. Likewise, site-specific hydrogeologic factors will affect these decisions. Sites with very low permeability formations or fractures causing discrete flow channels may require a unique monitoring approach. Unlike water supply wells, wells installed for ground-water quality assessment and restoration programs are often installed in low water-yielding settings (e.g., clays, silts). Alternative types of sampling points and sampling methods are often needed in these types of environments, because low-permeability settings may require extremely low-flow purging (<0.1 L/min) and may be technology-limited. Where devices are not readily available to pump at such low flow rates, the primary consideration is to avoid dewatering of

the well screen. This may require repeated recovery of the water during purging while leaving the pump in place within the well screen.

Use of low-flow techniques may be impractical in these settings, depending upon the water recharge rates. The sampler and the end-user of data collected from such wells need to understand the limitations of the data collected; i.e., a strong potential for underestimation of actual contaminant concentrations for volatile organics, potential false negatives for filtered metals and potential false positives for unfiltered metals. It is suggested that comparisons be made between samples recovered using low-flow purging techniques and samples recovered using passive sampling techniques (i.e., two sets of samples). Passive sample collection would essentially entail acquisition of the sample with no or very little purging using a dedicated sampling system installed within the screened interval or a passive sample collection device.

### **A. Low-Permeability Formations (<0.1 L/min recharge)**

#### **1. Low-Flow Purging and Sampling with Pumps**

- a. "portable or non-dedicated mode" - Lower the pump (one capable of pumping at <0.1 L/min) to mid-screen or slightly above and set in place for minimum of 48 hours (to lessen purge volume requirements). After 48 hours, use procedures listed in Part IV above regarding monitoring water quality parameters for stabilization, etc., but do not dewater the screen. If excessive drawdown and slow recovery is a problem, then alternate approaches such as those listed below may be better.
- b. "dedicated mode" - Set the pump as above at least a week prior to sampling; that is, operate in a dedicated pump mode. With this approach significant reductions in purge volume should be realized. Water quality parameters should stabilize quite rapidly due to less disturbance of the sampling zone.

#### **2. Passive Sample Collection**

Passive sampling collection requires insertion of the device into the screened interval for a sufficient time period to allow flow and sample equilibration before extraction for analysis. Conceptually, the extraction of water from low yielding formations seems more akin to the collection of water from the unsaturated zone and passive sampling techniques may be more appropriate in terms of obtaining "representative" samples. Satisfying usual sample volume requirements is typically a problem with this approach and some latitude will be needed on the part of regulatory entities to achieve sampling objectives.

### **B. Fractured Rock**

In fractured rock formations, a low-flow to zero purging approach using pumps in conjunction with packers to isolate the sampling zone in the borehole is suggested. Passive multi-layer sampling devices may also provide the most "representative" samples. It is imperative in these settings to identify flow paths or water-producing fractures prior to sampling using tools such as borehole flowmeters and/or other geophysical tools.

After identification of water-bearing fractures, install packer(s) and pump assembly for sample collection using low-flow sampling in "dedicated mode" or use a passive sampling device which can isolate the identified water-bearing fractures.

## **VI. Documentation**

The usual practices for documenting the sampling event should be used for low-flow purging and sampling techniques. This should include, at a minimum: information on the conduct of purging operations (flow-rate, drawdown, water-quality parameter values, volumes extracted and times for measurements), field instrument calibration data, water sampling forms and chain of custody forms. See Figures 2 and 3 and "Ground Water Sampling Workshop -- A Workshop Summary" (U. S. EPA, 1995) for example forms and other documentation suggestions and information. This information coupled with laboratory analytical data and validation data are needed to judge the "useability" of the sampling data.

## **VII. Notice**

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Project \_\_\_\_\_ Site \_\_\_\_\_ Well No. \_\_\_\_\_ Date \_\_\_\_\_

Well Depth \_\_\_\_\_ Screen Length \_\_\_\_\_ Well Diameter \_\_\_\_\_ Casing Type \_\_\_\_\_

Sampling Device \_\_\_\_\_ Tubing type \_\_\_\_\_ Water Level \_\_\_\_\_

Measuring Point \_\_\_\_\_ Other Infor \_\_\_\_\_

\_\_\_\_\_

Sampling Personnel \_\_\_\_\_

[illegible]

Information: 2 in = 617 ml/ft, 4 in = 2470 ml/ft:  $\text{Vol}_{\text{cyl}} = \pi r^2 h$ ,  $\text{Vol}_{\text{sphere}} = 4/3 \pi r^3$

Project \_\_\_\_\_ Site \_\_\_\_\_ Well No. \_\_\_\_\_ Date \_\_\_\_\_  
Well Depth \_\_\_\_\_ Screen Length \_\_\_\_\_ Well Diameter \_\_\_\_\_ Casing Type \_\_\_\_\_  
Sampling Device \_\_\_\_\_ Tubing type \_\_\_\_\_ Water Level \_\_\_\_\_  
Measuring Point \_\_\_\_\_ Other Infor \_\_\_\_\_  
\_\_\_\_\_  
Sampling Personnel \_\_\_\_\_

[illegible]

**Information:** 2 in = 617 ml/ft, 4 in = 2470 ml/ft:  $\text{Vol}_{\text{cyl}} = \pi r^2 h$ ,  $\text{Vol}_{\text{sphere}} = 4/3 \pi r^3$

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<b>GROUP</b>	Sampling Procedures				
<b>SUB-GROUP</b>	Soil Sampling Procedures				
<b>TITLE</b>	Surface Soil Sampling				
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## INTRODUCTION

The following Standard Operating Procedure (SOP) is to describe the procedures for collecting representative soil samples. Analysis of soil samples may determine whether concentrations of specific soil pollutants exceed established action levels, or if the concentrations of soil pollutants present a risk to public health, welfare, or the environment. This SOP is similar to SOP Number 1001.03 for collecting near surface soil samples with a hand auger.

## PROCEDURE

Surface soil samples may be collected using a variety of methods and equipment. The methods and equipment used are dependent on the depth of the desired sample, the type of sample required (disturbed versus undisturbed), and the type of soil. Near-surface soils may be easily sampled using a spade, trowel, or hand scoop.

### Sample Preservation

Cooling to  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , supplemented by a minimal holding time, is suggested.

### Interferences and Potential Problems

There are two primary interferences or potential problems associated with soil sampling: cross-contamination of samples and improper sample collection. Cross-contamination problems can be eliminated or minimized through the use of dedicated (disposable) sampling equipment. If this is not possible or practical, then decontamination of sampling equipment is necessary. Improper sample collection can involve using contaminated equipment, disturbance of the matrix resulting in compaction of the sample, or inadequate homogenization of the samples where required, resulting in variable, non-representative results. Homogenization may also affect sample representativeness where the analytical requirements include volatile organic compounds.

### Equipment or Apparatus

The equipment used for sampling may be selected from the following list, as appropriate:

- Tape measure
- Survey stakes or flags
- Stainless steel, plastic, or other appropriate homogenization bucket or bowl
- Ziploc plastic bags
- Logbook
- Labels
- Chain-of-custody forms and seals
- Coolers
- Ice
- Decontamination supplies and equipment
- Canvas or plastic sheet
- Spatulas/spades/shovels
- Scoops



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- Plastic or stainless steel spoons
- Trowel

### Preparation

1. Determine the extent of the sampling effort, the sampling methods to be employed, and what equipment and supplies are required.
2. Obtain necessary sampling and monitoring equipment from the list above.
3. Prepare schedules, and coordinate with staff, client, and regulatory agencies, if appropriate.
4. Perform a general site survey prior to site entry in accordance with the site-specific health and safety plan.
5. Decontaminate or preclean equipment, and ensure that it is in working order.
6. Use stakes, buoys, or flagging to identify and mark all sampling locations. Consider specific site factors, including extent and nature of contaminant, when selecting sample locations. If required, the proposed locations may be adjusted based on site access, property boundaries, and surface obstructions. All staked locations will be utility-cleared by the property owner or other responsible party prior to soil sampling.
7. Evaluate safety concerns associated with sampling that may require use of personal protective equipment and/or air monitoring.

### Surface Soil Sample Collection

Collect samples from the near-surface soil with tools such as spades, shovels, and scoops. Surface material can be removed to the required depth with this equipment, then a stainless steel or plastic scoop can be used to collect the sample. The use of a flat, pointed mason trowel to cut a block of the desired soil can be helpful when undisturbed profiles are required. A stainless steel scoop, lab spoon, or plastic spoon will suffice in most other applications. Avoid the use of devices plated with chrome or other target analyte materials.

The following procedures should be followed when collecting surface soil samples:

1. Carefully remove the top layer of soil or debris to the desired sample depth with a pre-cleaned spade.
2. Using a pre-cleaned, stainless steel scoop, plastic spoon, or trowel, remove and discard a thin layer of soil from the area which came in contact with the spade.
3. If volatile organic analysis is to be performed, transfer a portion of the sample directly into an appropriate, labeled sample container(s) with a stainless steel lab spoon, plastic lab spoon, or equivalent and secure the cap(s) tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into an appropriate, labeled container(s) and secure the cap(s) tightly; or if composite samples are to be collected, place a sample from another sampling interval into the

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homogenization container and mix thoroughly. When compositing is complete, place the sample into appropriate, labeled container(s) and secure the cap(s) tightly.

4. Fill hole created through sampling with unused material or other appropriate backfill material (sand).
5. Record applicable information into field log book or appropriate forms as documentation of sampling.

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## INTRODUCTION

The following Standard Operating Procedure (SOP) is to describe the procedures for collecting representative surface water samples. Analysis of surface samples may determine whether concentrations of specific soil pollutants exceed established action levels, or if the concentrations of pollutants present a risk to public health, welfare, or the environment.

## PROCEDURE

Surface water samples may be collected using a variety of methods and equipment. The methods and equipment used are usually dependent on the location of the body of water being sampled. Sampling can be performed by merely submerging the sample container, a weighted-bottle sampler with stopper, a bailer, or by pump assisted methods. Several types of pumps can be used for sampling depending on the objectives of sampling and the site conditions.

### Sample Preservation

Samples are to be preserved in conformance with the site-specific Quality Assurance Project Plan, Sampling and Analysis Plan or work plan. In general these requirements include refrigeration to 4°C, addition of appropriate additives (HCl, H<sub>2</sub>SO<sub>4</sub>, NaOH) to adjust and fix pH, and a defined maximum holding time. If a site-specific plan is not available, the analytical laboratory should be consulted for the appropriate preservation procedures.

### Interferences and Potential Problems

There are two primary interferences or potential problems associated with surface water sampling: cross-contamination of samples and improper sample collection. Cross-contamination problems can be eliminated or minimized through the use of dedicated sampling equipment. If this is not possible or practical, then decontamination of sampling equipment is necessary. Improper sample collection can involve using contaminated equipment, undue disturbance of the sample matrix, or improper sample location.

### Equipment or Apparatus

- Ziploc plastic bags
- Logbook
- Labels
- Chain-of-custody forms and seals
- Coolers
- Ice
- Decontamination supplies and equipment
- Discharge tubing
- Sample containers
- Sampling devices

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### Preparation

1. Determine the extent of the sampling effort, the sampling methods to be employed, and which equipment and supplies are required.
2. Obtain necessary sampling and monitoring equipment.
3. Decontaminate or preclean equipment, and ensure that it is in working order.
4. Prepare schedules, and coordinate with staff, client, and regulatory agencies, if appropriate.
5. Perform a general site survey prior to site entry in accordance with the site-specific health and safety plan.

### Surface Water Sampling

Samples from shallow depths can be readily collected by merely submerging the sample container. In flowing surface water bodies, the container's mouth should be positioned so that it faces upstream, while the sampling personnel stand downstream so as not to stir up sediment that could potentially contaminate the sample.

Collecting a representative sample from a larger body of surface water requires that samples be collected near the shore unless boats are feasible and permitted. If boats are used, the body of water should be cross sectioned, and samples should be collected at various depths across the body of water in accordance with the specified sampling plan. For this type of sampling, a weighted-bottle sampler is used to collect samples at a predetermined depth. The sampler consists of a glass bottle, a weighted sinker, a bottle stopper, and a line that is used to open the bottle and to lower and raise the sampler during sampling. The procedure for use is as follows:

- Assemble the weighted bottle sampler.
- Gently lower the sampler to the desired depth so as not to remove the stopper prematurely.
- Pull out the stopper with a sharp jerk of the sampler line.
- Allow the bottle to fill completely, as evidenced by the cessation of air bubbles.
- Raise the sampler and cap the bottle.
- Wipe the bottle clean. The sampling bottle can be also be used as the sample container for shipping.

Teflon bailers have also been used where feasible for collecting samples in deep bodies of water.

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Another method of extending the reach of sampling efforts is the use of a small peristaltic pump. In this method the sample is drawn through heavy-wall Teflon tubing and pumped directly into the sample container. This system allows the operator to reach into the liquid body, sample from depth, or sweep the width of narrow streams.

The general sampling procedures are listed below:

1. Collect the sample using whichever technique, submerged bottle, bottle sampler with stopper, pump & tubing, or bailer.
2. The collected sample may be collected in the sample containers or may be transferred to the appropriate sample containers in order of the volatile organics first and inorganics last.
3. Label sample containers, place on ice in a cooler, remove, and decontaminate equipment as necessary.

## REFERENCES

SOP 0110.01 Sample Nomenclature  
SOP 1005.01 Field Duplicate Collection  
SOP 1005.02 Rinse Blank Preparation  
SOP 1005.03 Field Blank Preparation  
SOP 1101.01 Sample Custody - Field  
SOP 1102.01 Sample Shipping  
SOP 1201.01 Sampling Equipment Decontamination  
SOP 1501.01 Field Logbook

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## INTRODUCTION

The following Standard Operating Procedure (SOP) is to describe the procedures for collecting representative sediment samples using a trowel, piston corer, WILDCO KB Core Sampler, a Ponar Grab Sampler, or other similar equipment. Analysis of sediment samples may be performed to determine whether concentrations of specific sediment pollutants exceed established action levels, or if the concentrations of sediment pollutants present a risk to public health, welfare, or the environment.

## PROCEDURE

### Overview

Sediment samples may be collected using trowels, core and Ponar sampler, or a variety of similar methods and equipment. The methods and equipment used are dependent on the depth of the desired sample, the type of sample required (disturbed versus undisturbed), and the type of sediment (fines versus coarse). Sampling in shallow areas or streams near the surface may only require a hand trowel, while sampling at depth may be performed using a core or Ponar sampler.

### Sample Preservation

Refrigeration to  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , supplemented by a minimal holding time, is suggested.

### Interferences and Potential Problems

There are two primary interferences or potential problems associated with sediment sampling: cross-contamination of samples and improper sample collection. Cross-contamination problems can be eliminated or minimized through the use of dedicated (disposable) sampling equipment. If this is not possible or practical, then decontamination of sampling equipment is necessary. Improper sample collection can involve using contaminated equipment, disturbance of the matrix resulting in mixing of the sample, or inadequate homogenization of the samples where required, resulting in variable, non-representative results. Homogenization may also affect sample representativeness when the analytical requirements include volatile organic compounds.

### Equipment or Apparatus

The equipment selected for the sampling effort may include the following as appropriate:

- Tape measure
- Survey stakes or flags
- Stainless steel, plastic, or other appropriate homogenization bucket or bowl
- Ziploc plastic bags
- Logbook
- Labels
- Chain-of-custody forms and seals
- Coolers
- Ice

<b>SOP</b>	<b>1002.04</b>				
<b>GROUP</b>	Sampling Procedures				
<b>SUB-GROUP</b>	Soil Sampling Procedures				
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- Decontamination supplies and equipment (i.e. brushes and buckets)
- Canvas or plastic sheeting
- Spatulas
- Scoops
- Plastic or stainless steel spoons
- Trowel
- Auger bucket
- Extension rods
- T-handle
- KB Core Sampler
- Ponar Grab Sampler
- Air monitor

#### Preparation

1. Determine the extent of the sampling effort, the sampling methods to be employed, and which equipment and supplies are required.
2. Obtain necessary sampling and monitoring equipment from the list above. Additional equipment may be added to this list as appropriate to perform other sampling.
3. Decontaminate or preclean equipment, and ensure that it is in working order.
4. Perform a general site survey prior to site entry in accordance with the site-specific health and safety plan.
5. Use stakes, buoys, or flagging to identify and mark all sampling locations. Consider specific site factors, including extent and nature of contaminant, when selecting sample locations. If required, the proposed locations may be adjusted based on site access, property boundaries, and obstructions.

#### Sediment Sampling in Shallow Waters

The following procedures should be used when collecting sediment samples in shallow waters:

1. Collect sediments as specified in the work plan or as determined during office preparation activities, using a stainless steel trowel, piston corer or similar device and a stainless steel, tempered glass or aluminum container.
2. Standing downstream of the sample stations, collect discrete sediment samples from each station and, if required in the work plan, composite in stainless steel, tempered glass or aluminum container.
3. Collect sediment samples of deposited material from the depth specified in the work plan or as determined during the office preparation activities. Record the depth in the logbook. Selective removal of the top sediment layers may be required and should be accomplished by carefully removing the sediments with a stainless steel trowel or scoop. In streams where water velocity is insufficient to disturb sediment fines during sediment sampling, a stainless

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steel trowel or scoop may be used for sampling. Where water velocities are high, a stainless steel corer will be utilized.

4. When applicable, composite discrete sediment samples by placing equal volumes of sediment material collected from the sample points into the container and mixing thoroughly to obtain a homogeneous mixture. Samples may be sieved or hand picked, if necessary, to remove larger materials, such as leaves, sticks, gravel, or rocks. Record in the logbook the nature of any materials removed from the sediment samples.
5. Place each sediment sample into the proper clean, unused sample container, as required by the work plan or laboratory. Sampling personnel must avoid placing sediment into the sample container and decanting off the excess liquid in analyzing for volatile organics and water soluble compounds in the sediment and reduces accurate representation of sediment analysis.
6. Fill out labels with waterproof ink and attach to the sample container.
7. Decontaminate sampling equipment between samples.

#### Sediment Sampling in Deep Waters

Procedures for sampling in deep waters are the same as for shallow waters except the sampling equipment is different. Soft, fine-grained sediments collected in deep waters will be sampled with a WILDCO KB Core Sampler or similar equipment. Coarse-grained sediments will be collected utilizing a Ponar Grab Sampler or similar equipment. Both samplers will be operated from a boat following appropriate safety procedures. Documentation, containerization, labeling and decontamination procedures are the same as for sediment samples collected in shallow waters.

#### Sediment Sampling in Drainage Ditches and Intermittent Streams

Procedures for sediment sampling in drainage ditches and the dry portions of intermittent streams are as specified for shallow water sediments.



<b>SOP</b>	<b>1005.01</b>				
<b>GROUP</b>	Sampling Procedures				
<b>SUB-GROUP</b>	Field QA/QC Sampling				
<b>TITLE</b>	Field Duplicate Collection				
<b>DATE</b>	4/27/2005	<b>FILE</b>	1005-01.DOC	<b>PAGE</b>	1 of 2

## INTRODUCTION

The following Standard Operating Procedure (SOP) describes the procedure for collecting field duplicate soil and water samples. When samples are collected for analysis, it is typically desired that independent data allowing evaluation of laboratory precision (i.e., the degree to which a laboratory result can be repeated) on site-specific samples be collected.

A field duplicate sample is a second sample collected at the same location as the original sample. Duplicate samples are collected simultaneously or in immediate succession, using identical recovery techniques, and treated in an identical manner during storage, transportation, and analysis. The sample containers are assigned an identification number in the field such that they cannot be identified (blind duplicate) as duplicated samples by laboratory personnel performing the analysis. Specific locations are designated for collection of field duplicate samples prior to the beginning of sample collection.

The duplicate soil sampling procedure is closely related to SOP Nos. 1001.01, 1001.03, and 1001.10 regarding soil sampling procedures. This procedure serves as an alternative method or extension of sample preparation prior to placing the samples in containers, as described in the 1001 series of the SOPs (e.g. 1001.01 and 1001.03).

## DUPLICATE SOIL SAMPLING PROCEDURE

The procedure to be used to physically collect soil samples are described in SOP Nos. 1001.01 and 1001.03. Reference should be made to these SOPs for specific sampling equipment, procedures, and other general guidelines. As soil is collected, the following procedure will be used to prepare a field duplicate sample:

- The soil will be collected in general accordance with SOP 1001.01 or 1001.03, with the exception that samples will generally not be immediately placed into sample containers and an additional preparation step (i.e., sample splitting) will be performed.
- As they are collected, soil samples to be submitted as field duplicates will be staged in a clean mixing bowl or mixing bucket.
- For samples that will be analyzed for volatile organic compounds, the soil sample will be split in half and an equal portion of soil will be placed directly into two or more different sample containers, each container representing a different sample for laboratory analysis. The soil will not be homogenized to minimize the potential for volatilization of the organic compounds potentially in the sample.
- For analyses of chemicals other than volatile organic compounds, the soil removed from the discrete sample location will be homogenized in a clean mixing bowl using a clean scoop or spatula (as described in SOPs 1001.01 and 1001.03). Homogenization will generally continue until the discrete samples being combined are reasonably indistinguishable as individual samples in the soil mixture. However, it is recognized that homogenization can be difficult for highly plastic clays. In this case, equal amounts of the soil core of each clay sample will be cut into small, roughly cubical pieces using a stainless steel knife and placed into a bowl and homogenized to extent practical.

<b>SOP</b>	<b>1005.01</b>				
<b>GROUP</b>	Sampling Procedures				
<b>SUB-GROUP</b>	Field QA/QC Sampling				
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- The field duplicate sample (except for volatiles as note above) will be collected from the mixing bowl containing the homogenized samples after homogenization is performed. The composited sample will be collected using a stainless steel or disposable plastic scoop or similar tool. The sample will be placed in a clean sample container and then handled in accordance with soil sampling SOPs 1001.01 and 1001.03.

Another difference from the referenced SOPs is that additional soil volume may need to be collected from a discrete sample location during the sampling process to provide sufficient sample volume for two or more sets of laboratory analyses. If the collection of additional sample volume will result in the sample interval expanding to greater depths or laterally outward, the sampling tools identified in 1001 series of the SOPs can be used at two immediately vertically or laterally adjacent locations, as appropriate. If sampling from two adjacent but distinct locations is necessary to obtain adequate sample volume, the soil from the two locations should be composited in accordance with SOP 1001.10. Field duplicates of composited samples may also be performed using this SOP for field duplicate samples.

Variations on this procedure are allowable to accommodate different soil conditions and any site requirements specifically identified in the site-specific Sampling and Analysis Plan. Equipment that may be used as part of the soil compositing procedure is identified under SOP Nos. 1001.01 and 1001.03 where soil sampling methods are described.

## **DUPLICATE WATER SAMPLING PROCEDURES**

The procedure to be used to physically collect water samples are described in 1002 series of the SOPs (e.g. 1002.01 and 1002.02). Reference should be made to these SOPs for specific sampling equipment, procedures, and other general guidelines. A duplicate water sample will be collected from the same location as the parent sample and within 15 minutes of the collection of the parent sample.

The number of samples that may be submitted as blind field duplicates for the project in question will be specified in the site-specific sampling plan. Blind field duplicates are typically collected at a frequency of 1 per 10 samples of a given environmental media at sites, especially where laboratory analytical data will be used for evaluating regulatory compliance and other engineering judgments. Sampling in support of a routine monitoring program may not require field duplicates. Reference should be made to the site-specific contract and work plans.

## **REFERENCES**

SOP No. 1001.01 - Standard Operating Procedure, Surface Soil Sampling  
SOP No. 1001.03 - Standard Operating Procedure, Soil Sampling - Hand Auger Method  
SOP No. 1001.10 - Standard Operating Procedure, Soil Compositing

<b>SOP</b>	<b>1005.02</b>				
<b>GROUP</b>	Sampling Procedures				
<b>SUB-GROUP</b>	Field QA/QC Sampling				
<b>TITLE</b>	Rinse Blank Preparation				
<b>DATE</b>	2/6/2009	<b>FILE</b>	1005-02.DOC	<b>PAGE</b>	1 of 1

## INTRODUCTION

The following Standard Operating Procedure (SOP) presents a method to prepare a type of quality control sample specific to the field decontamination process, the equipment rinse blank. The rinse blank provides information on the effectiveness of the decontamination process employed in the field. When used in conjunction with field blanks and trip blanks, the rinse blank can be used to assist in evaluating possible compromise of samples from field related activities.

## PROCEDURE

The equipment rinse blank is prepared by passing target analyte-free (i.e., deionized) water over and through a field decontaminated sampling device, then collecting the rinse water in appropriate clean sample containers. Rinse blanks will typically be collected from equipment that comes in contact with samples, such as auger buckets, split spoons, bailers, shelby tubes, and stainless steel spoons/trowels. The collected sample will be coded appropriately prior to logging and shipping. Equipment blanks are not required if dedicated sampling equipment is used. Equipment blanks will be collected periodically during the day immediately after decontamination of the sampling equipment being used.

The frequency for collecting equipment blanks will be determined prior to engaging in field activities, and communicated in site-specific quality assurance project plans, sampling and analyses plans, or a type of work plan. Equipment blanks will be collected at a rate relative to each type of sample collection procedure (i.e., surface sample, sample at depth using a hand auger). Equipment blanks will generally be collected at a frequency of 1 per 20 (normal) samples of a given matrix.

<b>SOP</b>	<b>1101.01</b>				
<b>GROUP</b>	Sampling Handling				
<b>SUB-GROUP</b>	Sample Custody				
<b>TITLE</b>	Sample Custody in the Field				
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## INTRODUCTION

The following Standard Operating Procedure (SOP) presents procedures for maintaining sample chain of custody (COC) during activities where samples are collected.

## PROCEDURE

Sample custody is defined as being under a person's custody if any of the following conditions exist:

- it is in their possession,
- it is in their view, after being in their possession,
- it was in their possession and they locked it up, or
- it is in a designated secure area.

A designated field sampler will be personally responsible for the care and custody of collected samples until they are transferred to another person or properly dispatched to the laboratory. To the extent practicable, as few people as possible will handle the samples.

Sample tags or labels will be completed and applied to the container of each sample. When the tags or labels are being completed, waterproof ink will be used. If waterproof ink is not used, the tags or labels will be covered by transparent waterproof tape. Sample containers may also be placed in Ziploc-type storage bags to help keep them clean in the cooler. Information typically included on the sample tags or labels will include the following:

- Project Code
- Station Number and Location
- Sample Identification Number
- Date and Time of Sample Collection
- Type of Laboratory Analysis Required
- Preservation Required, if applicable
- Collector's Signature
- Priority (optional)
- Other Remarks

Additional information may include:

- Anticipated Range of Results (Low, Medium, or High)
- Sample Analysis Priority

<b>SOP</b>	<b>1101.01</b>				
<b>GROUP</b>	Sampling Handling				
<b>SUB-GROUP</b>	Sample Custody				
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A COC form will be completed each time a sample or group of samples is prepared for transfer to the laboratory. The form will repeat the information on each of the sample labels and will serve as documentation of handling during shipment. The minimum information requirements of the COC form are listed in Table 1101.01-A. An example COC form is shown in Figure 1101.01-A. The completed COC must be reviewed by the Field Team Leader or Site Manager prior to sample shipment. The COC form will remain each sample shipping container at all times, and another copy will be retained by the member of the sampling team who originally relinquished the samples or in a project file.

<b>SOP</b>	<b>1101.01</b>				
<b>GROUP</b>	Sampling Handling				
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**TABLE 1101.01-A CHAIN OF CUSTODY FORM**

<b>INFORMATION</b>	<b>COMPLETED BY</b>	<b>DESCRIPTION</b>
<b>COC</b>	Laboratory	enter a unique number for each chain of custody form
<b>SHIP TO</b>	Field Team	enter the laboratory name and address
<b>CARRIER</b>	Field Team	enter the name of the transporter (e.g., FedEx) or handcarried
<b>AIRBILL</b>	Field Team	enter the airbill number or transporter tracking number (if applicable)
<b>PROJECT NAME</b>	Field Team	enter the project name
<b>SAMPLER NAME</b>	Field Team	enter the name of the person collecting the samples
<b>SAMPLER SIGNATURE</b>	Field Team	signature of the person collecting the samples
<b>SEND RESULTS TO</b>	Field Team	enter the name and address of the prime contractor
<b>FIELD SAMPLE ID</b>	Field Team	enter the unique identifying number given to the field sample (includes MS, MSD, field duplicate and field blanks)
<b>DATE</b>	Field Team	enter the year and date the sample was collected in the format M/D (e.g., 6/3)
<b>TIME</b>	Field Team	enter the time the sample was collected in 24 hour format (e.g., 0900)
<b>MATRIX</b>	Field Team	enter the sample matrix (e.g., water, soil)
<b>PRESERVATIVE</b>	Field Team	enter the preservative used (e.g., HNO3) or "none"
<b>FILTERED/ UNFILTERED</b>	Field Team	enter "F" if the sample was filtered or "U" if the sample was not filtered
<b>CONTAINERS</b>	Field Team	enter the number of containers associated with the sample
<b>MS/MSD</b>	Field Team or Laboratory	enter "X" if the sample is designated for the MS/MSD
<b>ANALYSES REQUESTED</b>	Field Team	enter the method name of the analysis requested (e.g., SW6010A)
<b>COMMENTS</b>	Field Team	enter comments
<b>SAMPLE CONDITION UPON RECEIPT AT LABORATORY</b>	Laboratory	enter any problems with the condition of any sample(s)
<b>COOLER TEMPERATURE</b>	Laboratory	enter the internal temperature of the cooler, in degrees C, upon opening
<b>SPECIAL INSTRUCTIONS/COMMENTS</b>	Laboratory	enter any special instructions or comments
<b>RELEASED BY (SIG)</b>	Field Team and Laboratory	enter the signature of the person releasing custody of the samples
<b>COMPANY NAME</b>	Field Team and Laboratory	enter the company name employing the person releasing/receiving custody
<b>RECEIVED BY (SIG)</b>	Field Team and Laboratory	enter the signature of the person receiving custody of the samples
<b>DATE</b>	Field Team and Laboratory	enter the date in the format M/D/YY (e.g., 6/3/96) when the samples were released/received
<b>TIME</b>	Field Team and Laboratory	enter the date in 24 hour format (e.g., 0900) when the samples were released/received

<b>SOP</b>	<b>1101.01</b>				
<b>GROUP</b>	Sampling Handling				
<b>SUB-GROUP</b>	Sample Custody				
<b>TITLE</b>	Sample Custody in the Field				
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**FIGURE 1101.01-A CHAIN OF CUSTODY FORM**

<b>SOP</b>	<b>1201.01</b>				
<b>GROUP</b>	Decontamination				
<b>SUB-GROUP</b>	Sampling Equipment Decontamination				
<b>TITLE</b>	Sampling Equipment Decontamination				
<b>DATE</b>	11/19/2001	<b>FILE</b>	1201-01.DOC	<b>PAGE</b>	1 of 3

## INTRODUCTION

The following Standard Operating Procedure (SOP) presents the methods used for minimizing the potential for cross-contamination, and provides general guidelines for sampling equipment decontamination procedures.

## PROCEDURE

As part of the Health and Safety Plan (HASP), develop and set up a decontamination plan before any personnel or equipment enter the areas of potential exposure. The decontamination plan should include the following:

- The number, location, and layout of decontamination stations
- Which decontamination apparatus is needed
- The appropriate decontamination methods
- Methods for disposal of contaminated clothing, apparatus, and solutions

### Decontamination Methods

Personnel, samples, and equipment leaving the contaminated area of a site will be decontaminated. Various decontamination methods will be used to either physically remove contaminants, inactivate contaminants by disinfection or sterilization, or both. The physical decontamination techniques appropriate for equipment decontamination can be grouped into two categories: abrasive methods and non-abrasive methods.

#### *Abrasive Cleaning Methods*

Abrasive cleaning methods work by rubbing/scrubbing the surface containing the contaminant. This method includes mechanical and wet blasting methods.

Mechanical cleaning methods use brushes of metal or nylon. The amount and type of contaminants removed will vary with the hardness of bristles, length of brushing time, and degree of brush contact.

Cleaning can also be accomplished by water blasting which is also referred to as steam cleaning and pressure washing. Pressure washing utilizes high-pressure that is sprayed from a nozzle onto sampling equipment to physically remove soil or (potentially) contaminated material. Steam cleaning is a modification of pressure washing where the water is heated to temperatures approaching 100°C to assist in removing organic constituents from equipment.



<b>SOP</b>	<b>1201.01</b>				
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<b>SUB-GROUP</b>	Sampling Equipment Decontamination				
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### *Disinfection/Rinse Methods*

Disinfectants are a practical means of inactivating chemicals or contaminants of concern. Standard sterilization methods involve heating the equipment which is impractical for large equipment. Rinsing removes contaminants through dilution, physical attraction, and solubilization.

The use of distilled/deionized water commonly available from commercial vendors may be acceptable for decontamination of sampling equipment provided that it has been verified by laboratory analysis to be target analyte free. Tap water may be used from any municipal water treatment system for mixing of decontamination solutions. An untreated potable water supply is not an acceptable substitute for tap water. Acids and solvents are occasionally utilized in decontamination of equipment to remove metals and organics, respectively, from sampling equipment. Other than ethanol, these are avoided when possible due to the safety, disposal, and transportation concerns associated with them.

Equipment or apparatuses that may be selected for use include the following:

- Personal protective clothing
- Non-phosphate detergent
- Selected solvents for removal of polar and nonpolar organics (ethanol, methanol, hexane)
- Acid washes for removal of metals (nitric acid)
- Long-handled brushes
- Drop cloths or plastic sheeting
- Paper towels
- Galvanized tubs or buckets
- Distilled, deionized, or tap water (as required by the project)
- Storage containers for spent wash solutions
- Sprayers (pressurized and non-pressurized)
- Trash bags
- Safety glasses or splash shield

### Field Sampling Equipment Cleaning Procedures

The following procedures should be followed:

1. Where applicable, follow physical removal procedures previously described (pressure wash, scrub wash)
2. Wash equipment with a non-phosphate detergent solution
3. Rinse with tap water
4. Rinse with distilled or deionized water
5. Rinse with 10% nitric acid if the sample will be analyzed for metals/organics
6. Rinse with distilled or deionized water
7. Use a solvent rinse (pesticide grade) if the sample will be analyzed for organics
8. Air dry the equipment completely
9. Rinse again with distilled or deionized water

<b>SOP</b>	<b>1201.01</b>				
<b>GROUP</b>	Decontamination				
<b>SUB-GROUP</b>	Sampling Equipment Decontamination				
<b>TITLE</b>	Sampling Equipment Decontamination				
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10. Place in clean bag or container for storage/transport to subsequent sampling locations.

Selection of the solvent for use in the decontamination process is based on the contaminants present at the site. Solvent rinses are not necessarily required when organics are not a contaminant of concern and may be eliminated from the sequence specified below. Similarly, an acid rinse is not required if the analyses do not include inorganics. Use of a solvent is required when organic contamination is present on-site. Typical solvents used for removal of organic contaminants include acetone, ethanol, hexane, methanol, or water. An acid rinse step is required if metals are present on-site. If a particular contaminant fraction is not present at the site, the ten-step decontamination procedure listed above may be modified for site specificity.

Sampling equipment that requires the use of plastic tubing should be disassembled and the tubing replaced with clean tubing before commencement of sampling and between sampling locations. Plastic tubing should not be reused.

<b>SOP</b>	<b>1501.01</b>				
<b>GROUP</b>	Field Documentation				
<b>SUB-GROUP</b>					
<b>TITLE</b>	Field Logbook				
<b>DATE</b>	11/19/2001	<b>FILE</b>	1501-01.DOC	<b>PAGE</b>	1 of 3

## INTRODUCTION

The following Standard Operating Procedure (SOP) presents the procedures for documenting activities observed or completed in the field in a field logbook. The documentation should represent all activities of WESTON personnel and entities under WESTON's supervision.

## TERMS

FSP - Field Sampling Plan

SAP - Sampling and Analysis Plan

QAPP - Quality Assurance Project Plan

HASP - Health and Safety Plan

## PROCEDURE

Field logbooks will be used and maintained during field activities to document pertinent information observed or completed by WESTON personnel or entities that WESTON is responsible for providing oversight. Field logbooks are legal documents that form the basis for later written reports and may serve as evidence in legal proceedings. The Site Manager or Field Team Leader will review field log entries daily and initial each page of entries. Field logbooks will be maintained by the Site Manager or Field Team Leader during field activities and transferred to the project files for a record of activities at the conclusion of the project. General logbook entry procedures are listed below.

- Logbooks must be permanently bound with all pages numbered to the end of the book. Entries should begin on page 1.
- Only use blue or black ink (waterproof) for logbook entries.
- Sign entries at the end of the day, or before someone else writes in the logbook.
- If a complete page is not used, draw a line diagonally across the blank portion of the page and initial and date the bottom line.
- If a line on the page is not completely filled, draw a horizontal line through the blank portion.
- Ensure that the logbook clearly shows the sequence of the day's events.
- Do not write in the margins or between written lines, and do not leave blank pages to fill in later.
- If an error is made, make corrections by drawing a single line through the error and initialing it.
- Maintain control of the logbook and keep in a secure location.

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<b>GROUP</b>	Field Documentation				
<b>SUB-GROUP</b>					
<b>TITLE</b>	Field Logbook				
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Field logbooks will contain, at a minimum, the following information, if applicable:

#### General Information

- Name, location of site, and work order number
- Name of the Site Manager or Field Team Leader
- Names and responsibilities of all field team members using the logbook (or involved with activities for which entries are being made)
- Weather conditions
- Field observations
- Names of any site visitors including entities that they represent

#### Sample Collection Activities

- Date(s) and times of the sample collection or event.
- Number and types of collected samples.
- Sample location with an emphasis on any changes to documentation in governing documents (i.e., SAP, FSP). This may include measurements from reference points or sketches of sample locations with respect to local features.
- Sample identification numbers, including any applicable cross-references to split samples or samples collected by another entity.
- A description of sampling methodology, or reference to any governing document (i.e., FSP, SAP, QAPP).
- Summary of equipment preparation and decontamination procedures.
- Sample description including depth, color, texture, moisture content, and evidence of waste material or staining.
- Air monitoring (field screening) results.
- Types of laboratory analyses requested.

#### Site Health and Safety Activities

- All safety, accident, and/or incident reports.

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- Real-time personnel air monitoring results, if applicable, or if not documented in the HASP.
- Heat/cold stress monitoring data, if applicable.
- Reasons for upgrades or downgrades in personal protective equipment.
- Health and safety inspections, checklists (drilling safety guide), meetings/briefings.
- Calibration records for field instruments.

#### Oversight Activities

- Progress and activities performed by contractors including operating times.
- Deviations of contractor activities with respect to project governing documents (i.e., specifications).
- Contractor sampling results and disposition of contingent soil materials/stockpiles.
- Excavation specifications and locations of contractor confirmation samples.
- General site housekeeping and safety issues by site contractors.

<b>SOP</b>	<b>1502.01</b>				
<b>GROUP</b>	Field Documentation				
<b>SUB-GROUP</b>					
<b>TITLE</b>	Photograph Logs				
<b>DATE</b>	11/19/2001	<b>FILE</b>	1502-01.DOC	<b>PAGE</b>	1 of 1

## INTRODUCTION

The following Standard Operating Procedure (SOP) presents the requirements for collecting information related to photodocumentation of site activities.

## PROCEDURE

- Uniquely number each roll of film obtained for use.
- Record the following information for each negative exposed:
  1. Date and Time
  2. Photographer Name
  3. Witness Name
  4. Orientation (Landscape, Portrait, or Panaoramic)
  5. Description (including activity being performed, specific equipment of interest, sample location(s), compass direction photographer is facing)
- Record "NA" for the negatives not used if the roll is not completely used prior to development.
- Record unique roll number on receipt when film is submitted for development.
- Verify descriptions on log with negative numbers when photographs are received from processing.

## FORMS

Blank Photograph Logs can be printed from WESTON On-Line from the *Records Management Application*. Selecting the *Reports/Project Planning/Blank Photo Logs* menu option will generate a project specific log with 36 entries.

<b>SOP</b>	<b>0110.01</b>				
<b>GROUP</b>	Database Management System				
<b>SUB-GROUP</b>	Data Collection and Acquisition				
<b>TITLE</b>	Sample Nomenclature				
<b>DATE</b>	02/26/2009	<b>FILE</b>	0110-20060227.DOC	<b>PAGE</b>	1 of 2

## INTRODUCTION

The following Standard Operating Procedure (SOP) presents the sample nomenclature for analytical samples that will generate unique sample names compatible with most data management systems. The sample nomenclature is based upon specific requirements for the reporting of these results. A site specific data management plan should be prepared prior to sample collection.

## PROCEDURE

### SAMPLE NOMENCLATURE – SOIL AND SEDIMENT

#### Area of Concern – ID – Depth - Collection Type + QC Type

##### Where:

**Area of Concern:** A four-digit identifier used to designate the particular Area of Concern (AOC) that the location where the sample was collected.

**ID:** A three-digit identifier used to designate the particular location in the AOC from which the sample was collected or the center of the composite sample.

**Depth:** A two-digit code used to designate what depth of sample was collected:

03	0 to 3 inches
06	3 to 6 inches
12	6 to 12 inches

**Collection Type:** A one-digit code used to designate what type of sample was collected:

1	Surface Water
2	Ground Water
3	Leachate
4	Field QC/water sample
5	Soil/Sediment

6	Oil
7	Waste
8	Other
9	Drinking Water

**QC Type:** A one-digit code used to designate the QC type of the sample:

1	Normal
2	Duplicate
3	Rinsate Blank
4	Trip Blank
5	Field Blank
6	Confirmation

##### Examples:

- **2054-055-06-51:** Represents the normal soil sample collected from AOC 2054 at location 055 from 3 to 6 inches of depth.
- **2054-055-06-52:** Represents the duplicate soil sample collected from AOC 2054 at location 055 from 3 to 6 inches of depth.
- **2054-055-06-43:** Represents the rinsate water sample collected after the last sample of the day if last sample was collected from AOC 2054 at location 055 from 3 to 6 inches of depth.

<b>SOP</b>	<b>0110.01</b>				
<b>GROUP</b>	Database Management System				
<b>SUB-GROUP</b>	Data Collection and Acquisition				
<b>TITLE</b>	Sample Nomenclature				
<b>DATE</b>	02/26/2009	<b>FILE</b>	0110-20060227.DOC	<b>PAGE</b>	2 of 2

**SAMPLE NOMENCLATURE – WATER (from fixed station or location to be sampled more than once)**

**WELL OR STATION – YYYYMMDD - Collection Type + QC Type**

**Where:**

**Well or Station:** For Wells and boreholes always assume there will be 10 or more so Monitoring Well 1 becomes designated MW01 or MW-01. If it is anticipated that there will be over 100 wells designate Monitoring Well 1 as MW001 or MW-001.

**YYYYMMDD:** A four-digit year + two-digit month + two-digit day

**Collection Type:** A one-digit code used to designate what type of sample was collected and are shown on page 1.

**QC Type:** A one-digit code used to designate the QC type of the sample and are shown on page 1.

**Examples:**

- **MW01-20090226-21:** Represents the normal groundwater sample collected from Monitoring Well 1 on 26 February 2009.
- **MW01-20090226-44:** Represents the trip blank in the same ice chest as the groundwater sample in the previous collected from Monitor Well 1 on 02/26/2009. All trip blanks must have a sample ID and they must be unique and on the Chain-of-Custody.
- **2054-000-00-43:** Represents the rinsate sample from AOC 2054



## **APPENDIX C**

### **SITE-SPECIFIC DATA QUALITY OBJECTIVES**

## SITE-SPECIFIC DATA QUALITY OBJECTIVES

### JOHN BULLY URANIUM MINE

STEP 1. STATE THE PROBLEM	
Legacy uranium mine sites in the Grants Mining District of northwest New Mexico may contain soil/sediment and mine waste rock that are elevated in trace metals and radionuclides above background concentrations which may pose a hazard to human health and the environment.	
STEP 2. IDENTIFY THE DECISION	
Does the soil environment at the generic 20 acre uranium mine site contain hazardous and radiological materials at concentrations that: 1) equals or exceeds a value of two standard deviations above the mean site-specific background concentration for a specific radionuclide; or 2) exceeds three times the natural background concentrations for the specific radionuclide, whichever is lower. If these concentrations satisfy the criteria in 1) and 2), the conditions constitute and establish an “ <i>observed release</i> ” per the HRS Guidance Manual, Section 5.1 page 55; and the CERCLA SI Guidance in Section 4.9.4 page 89-90, (EPA/540-R-92-021).	
IDENTIFY THE ALTERNATIVE ACTIONS THAT MAY BE TAKEN BASED ON THE DECISIONS.	<ul style="list-style-type: none"> <li>If the concentrations of hazardous and radiological materials in soil at the uranium mine site constitute an <i>observed release</i>, then further remedial action under CERCLA will be recommended.</li> </ul>
STEP 3. IDENTIFY INPUTS TO THE DECISION	
INFORMATIONAL INPUTS NEEDED TO RESOLVE A DECISION.	<ul style="list-style-type: none"> <li>Elevated metal and radionuclide concentrations in soil at the uranium mine site are equal to or exceed two standard deviations above the mean site-specific background concentrations.</li> <li>Elevated metal and radionuclide concentrations in soil at the uranium mine site are equal to or exceed by three times the mean background concentrations for radiological measurement and soil sampling.</li> </ul>
SOURCES FOR EACH INFORMATIONAL INPUT AND INPUTS THAT ARE OBTAINED THROUGH ENVIRONMENTAL MEASUREMENTS.	<ul style="list-style-type: none"> <li>Radiological gamma survey measurements with handheld NaI detector instrument conducted at 200 ft., 100 ft., and/or 50 ft. grid spacing across site area and at unique site features.</li> <li>Background radiological measurements collected at four or more off site locations will provide an average background radioactivity concentration for comparison.</li> <li>Field measurements of gamma activity are collected and the field variance is calculated to determine the number of soil/sediments to be collected.</li> <li>Background surface soil samples analyzed by a laboratory for 23 metals and isotopes of three or four radionuclides.</li> <li>Suspected hot spot soil locations within the mine site property analyzed by a laboratory for 23 metals and isotopes of three or four radionuclides.</li> </ul>

**SITE-SPECIFIC DATA QUALITY OBJECTIVES**  
**JOHN BULLY URANIUM MINE**  
**(Continued)**

<b>STEP 3. IDENTIFY INPUTS TO THE DECISION (Continued)</b>	
BASIS FOR THE CONTAMINANT SPECIFIC ACTION LEVELS.	<ul style="list-style-type: none"> <li>Concentrations of hazardous materials and radionuclides more than three times the background concentrations constitute and “observed release” per the HRS Guidance Manual, Section 5.1 page 55.</li> <li>Concentrations of metal and radionuclide concentrations in soil/sediment that are equal to or exceed two standard deviations above the mean site-specific background concentrations constitute an observed release per Section 4.9.4 (page 89) of the guidance document for performing site inspections under CERCLA.</li> </ul>
POTENTIAL SAMPLING TECHNIQUES AND APPROPRIATE ANALYTICAL METHODS.	<ul style="list-style-type: none"> <li>Gamma radioactivity concentrations in cpm and/or uR/hr (dose) will be determined using field instruments to measure radioactivity on the soil surface and at 3 ft high for a 60 second count rate.</li> <li>Gamma measurements will be used to calculate the average background concentration, the average site concentration, the range, and the field variance.</li> <li>The field variance will be used to calculate the number of soil/sediment samples required for laboratory analysis to characterize the specific radionuclide concentrations.</li> <li>The number of soil/sediments samples will be determined by a calculation using the field variance, Upper Confidence Level 95% (90% or 80% if necessary) and a margin of error at 0.20.</li> <li>Laboratory analyte concentrations for specific metals and radionuclides will be used to calculate: the background mean concentrations, the site mean concentrations, the range, and the variance.</li> </ul>
<b>STEP 4. DEFINE THE BOUNDARIES OF THE STUDY</b>	
DOMAIN OF GEOGRAPHIC AREA WITHIN WHICH ALL DECISIONS MUST APPLY.	Property boundary surrounding uranium mine site and/or all areas suspected of impact by mine activities and/or natural erosion processes that may have dispersed on-site materials beyond property boundaries.
CHARACTERISTICS THAT DEFINE THE POPULATION OF INTEREST.	Gamma radiation and radionuclide concentration measured in soil/sediments impacted by mine waste rock.
DETERMINATION OF WHEN TO COLLECT DATA.	<ul style="list-style-type: none"> <li>Data will be collected after target uranium mine sites are identified and access is acquired from land owners.</li> <li>Field measurements of background gamma activity and site specific activity will be collected using a grid system.</li> <li>Determination of the field variance from the field measurements will be used in a formula to calculate the number of soil/sediments to be collected for laboratory analysis.</li> </ul>



**SITE-SPECIFIC DATA QUALITY OBJECTIVES**  
**JOHN BULLY URANIUM MINE**  
**(Continued)**

<b>STEP 4. DEFINE THE BOUNDARIES OF THE STUDY (Continued)</b>	
PRACTICAL CONSTRAINTS ON DATA COLLECTION.	<ul style="list-style-type: none"> <li>• Access to the site and/or appropriate background area is not attainable due to landowner and/or physical constraints.</li> <li>• Field radiological measurements may be unreliable due to excessive soil moisture, inclement weather, equipment malfunction, or operator error.</li> <li>• Erroneous determination of field gamma activity measurements and subsequent erroneous calculation of the field variance may result in an inadequate number of soil/sediments collected for laboratory analysis.</li> </ul>
<b>STEP 5. DEVELOP A DECISION RULE</b>	
SPECIFY THE PARAMETER THAT CHARACTERIZES THE POPULATION OF INTEREST.	<ul style="list-style-type: none"> <li>• Field measurements of gamma radioactivity will be used to calculate: the mean background gamma concentration; the on-site mean gamma concentration; the on-site range of gamma concentrations; and the field variance of the on-site gamma concentration.</li> <li>• The on-site gamma concentrations will be compared to the mean background gamma concentration of the mine site to determine if the concentration is equal to or two times the mean.</li> <li>• Laboratory analyte concentrations for specific metals and radionuclides will be used to calculate the specific mean background soil/sediment mean concentrations; the specific on-site mean soil/sediment concentrations; the range of on-site specific concentrations; and the statistical variability of on-site concentrations, e.g., the sample variance and standard deviation.</li> <li>• Laboratory analyte concentrations that are equal to or exceed three times the mean background concentrations will be characterized as an observed release.</li> <li>• Laboratory analyte concentrations that are equal to or exceed two standard deviations above the mean background concentration will be characterized as an observed release.</li> </ul>
SPECIFY THE ACTION LEVEL FOR THE DECISION.	<ul style="list-style-type: none"> <li>• Field measurements of gamma radioactivity that are equal to or exceed twice the mean background gamma activity concentration.</li> <li>• Laboratory analyte concentrations that are equal to or exceed three times the mean background concentrations will be characterized as an observed release.</li> <li>• Laboratory analyte concentrations that are equal to or exceed two standard deviations above the mean background concentration will be characterized as an observed release.</li> </ul>
DECISION RULES.	<ul style="list-style-type: none"> <li>• If on-site field gamma activity measurements exceed the mean background gamma activity concentration by more than two times, the likelihood of an observed release is high.</li> </ul>

**SITE-SPECIFIC DATA QUALITY OBJECTIVES**  
**JOHN BULLY URANIUM MINE**  
**(Continued)**

<b>STEP 6. SPECIFY LIMITS ON DECISION ERRORS</b>	
DETERMINE THE POSSIBLE RANGE OF THE PARAMETER OF INTEREST.	<ul style="list-style-type: none"> <li>• Limit for uncertainty in measurement is 20% (0.20) at a 95% confidence level for the data set.</li> <li>• Mean background gamma radioactivity concentrations typically range from 12-20 uR/hr or less than 3,000 to 5,000 cpm.</li> <li>• On-site uranium mine waste rock gamma radioactivity concentrations may range over 200 uR/hr &amp; higher, or several tens or hundreds of thousands cpm (&gt;&gt; 10,000-100,000 cpm).</li> <li>• Background concentration of radium-226 in soil is generally 1.0-1.5 pCi/g.</li> <li>• Uranium mass concentrations in soil typically measure 3 ug/g or 2 pCi/g.</li> <li>• Uranium mine site waste rock concentrations of radium-226 may exceed 100 pCi/g.</li> </ul>
DEFINE BOTH TYPES OF DECISION ERRORS AND IDENTIFY THE POTENTIAL CONSEQUENCES OF EACH.	<p><u>Type I Error:</u> Deciding that the uranium mine site is represented by field measurements and/or sample results does not exceed three times the mean background concentration or two standard deviations above the mean background concentration when, in truth, it does. The consequence of this decision error is that the soil/sediment/waste rock material will remain in place, unremediated, possibly presenting a hazard to human health and the environment. This decision error is the most severe.</p> <p><u>Type II Error:</u> Deciding that the uranium mine site area represented by field measurements and/or sample results does exceed the mean background concentration by three times or two standard deviations when, in truth, it does not. The consequences of this decision error further remedial action under CERCLA will continue and potentially divert resources from higher priority sites.</p>
TRUE STATE OF NATURE FOR EACH DECISION RULE.	<p><u>Type I:</u> The field and laboratory measurements of hazardous materials and radionuclide concentrations in soil are greater than three times or two standard deviations above the mean background concentrations.</p> <p><u>Type II:</u> The field and laboratory measurements of hazardous materials and radionuclide concentrations in soil are less than three times or two standard deviations above the mean background concentrations.</p>
DEFINITION OF THE TRUE STATE OF NATURE FOR THE MORE SEVERE DECISION ERROR AS THE BASELINE CONDITION OR THE NULL HYPOTHESES ( $H_0$ ) AND FOR THE LESS SEVERE DECISION ERROR AS THE ALTERNATIVE HYPOTHESES ( $H_a$ ). TRUE STATE OF NATURE FOR EACH DECISION RULE.	<p><u>Type I:</u> Ambient radioactivity levels impact human health.</p> <p><u>Type II:</u> Ambient radioactivity levels do not impact human health.</p>



**SITE-SPECIFIC DATA QUALITY OBJECTIVES**  
**JOHN BULLY URANIUM MINE**  
**(Continued)**

STEP 7. OPTIMIZE THE DESIGN	
REVIEW THE DQOs.	Determine what else can be done to improve the methodology. Get some internal and external review by other staff and agencies. Test implementation of proposed design/methodology at one or two sites then review lessons learned. Make adjustments in design and improve methodology with more sites over time.
DEVELOP GENERAL SAMPLING AND ANALYSIS DESIGN. A total of 15 soil and 2 waste source samples will be collected from the uranium mine pits and waste areas within the John Bully Uranium Mine and analyzed to determine the presence of metals and radionuclides above background concentrations.	

**APPENDIX D**

**TDD NO. 0035-11-06-03**

**EPA**U.S. EPA  
Washington, DC 20460**START3**  
**Technical Direction Document**TDD #: TO-0035-11-06-03  
Contract: EP-W-06-042Assessment/Inspection Activities -  
Enforcement Funds (0035)  
Weston Solutions, Inc.! = required field ☐ Moved To EASNote: Remaining Amount  
includes \$0.00 in Reserve.

<b>TDD Name:</b> John Bully Uranium Mine		<b>! Period:</b> Base Period
<b>! Purpose:</b> Work Assignment Initiation , Set/Revise Expenditure Limit		
<b>! Priority:</b> High		<b>! Start Date:</b> 06/30/2011
<b>Overtime:</b> Yes		<b>! Completion Date:</b> 12/30/2011
<b>! Funding Category:</b> Enforcement Funding		<b>Invoice Unit:</b>
<b>! Project/Site Name:</b> John Bully Uranium Mine		<b>WorkArea:</b> ASSESSMENT/INSPECTIONS ACTIVITIES
<b>Project Address:</b>		<b>Activity:</b> Integrated Assessment (IA)
<b>County:</b> McKinley		<b>Work Area Code:</b>
<b>City, State:</b> , NM		<b>Activity Code:</b>
<b>Zip:</b>		<b>EMERGENCY CODE:</b> <input type="checkbox"/> KAT <input type="checkbox"/> RIT
<b>! SSID:</b> A6BB		<b>FPN:</b>
<b>CERCLIS:</b> NMN000607164		<b>Performance Based:</b> No
<b>Operable Unit:</b>		
<b>Authorized TDD Ceiling:</b>	<b>Cost/Fee</b>	<b>LOE (Hours)</b>
<b>Previous Action(s):</b>	\$0.00	0.0
<b>This Action:</b>	\$25,000.00	0.0
<b>New Total:</b>	\$25,000.00	0.0

**Specific Elements** Assess the potential for short or long term clean-up actions., Perform field screening and analysis of samples.**Description of Work:****All activities performed in support of this TDD shall be in accordance with the contract and TO PWS.**

The Grants Mining District provided significant uranium extraction and production in New Mexico from the 1950s until late into the 20th century. There are three mining sub-districts within the Grants Mining District: Ambrosia Lake, Laguna, and Marquez. Land ownership within these sub-districts consists of public, tribal and private property. These mining sub-districts contain 97 former legacy uranium mines and five mill sites. The EPA is currently assessing the mine sites for releases that may have impacted soil, surface water and groundwater. Under this TDD, the contractor shall investigate mine water discharge locations, sample potentially impacted soil for elevated concentrations of elemental uranium and radionuclides, sample any surface water present for metals and radionuclides, and sample any accessible groundwater wells in the immediate area of three mine sites in the Ambrosia Lake sub-district. The contractor shall document mine site features (e.g. open mine portals, waste rock piles, mine operation-related structures, etc.) and sample locations with photographs, descriptions, and geospatially. A draft and final report will be written for the mine site. Coordinate with SAM, Lisa Price at [price.lisa@epa.gov](mailto:price.lisa@epa.gov) or 214-665-6744, upon receipt of the TDD.

**Accounting and Appropriation Information**

SFO: 22



Line	DCN	IFMS	Budget/ FY	Appropriati on Code	Budget Org Code	Program Element	Object Class	Site Project	Cost Org Code	Amount
1	ENC012	XXX	11	T	06S	302EC7C	2505	A6BBEA00	C001	\$25,000.00

Funding Summary:	Funding
Previous:	\$0.00
This Action:	\$25,000.00
Total:	\$25,000.00

**Funding Category**  
Enforcement Funding

#### Section

- Signed by Linda Carter/R6/USEPA/US on 06/29/2011 08:37:16 AM, according to Jeff Criner/start6/rfw-sta  
: Lisa Price Date: 06/28/2011

**Project Officer Section - Signed by Cora Stanley/R6/USEPA/US on 06/29/2011 10:36:14 AM, according to Jef**

**Project Officer:** Linda Carter **Date:** 06/29/2011

**Contracting Officer Section - Signed by Cora Stanley/R6/USEPA/US on 06/29/2011 10:36:14 AM, according t**

**Contracting Officer:** Cora Stanley **Date:** 06/29/2011

**Contractor Section - Signed by Robert Beck/start6/rfw-start/us on 06/29/2011 07:34:52 PM, according to /**

- ☒ No During the past three (3) calendar years has your company , or any of your employees that will  
☐ Yes be working at this site , previously performed work at this site /facility?

**Contractor Contact:** Robert Beck

**Date:** 06/29/2011

## **APPENDIX D**

### **LABORATORY DATA PACKAGES**

# **WESTON SOLUTIONS, INC.**

**John Bully Mine**

**STANDARD LEVEL IV  
REPORT OF ANALYSIS**

**WORK ORDER #11-09167-OR**

**October 28, 2011**

**EBERLINE ANALYTICAL/OAK RIDGE LABORATORY  
OAK RIDGE, TN**

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VII	Laboratory Technician's Notes & Run Logs	0026
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**Eberline Services – Oak Ridge Laboratory  
LABORATORY DATA SUPPORT CHECKLIST**

MP-001-3

Eberline Services Work Order # **11-09167**

The checklist items listed below are to be initialed by appropriate staff upon completion/verification.

Date for Partial	Initials	Date	Initials	Checklist Items
		9/30/11	JWM	Sample Log-In
		10/26/11	100	Data Compilation
		10/26/11	ALT	First Technical Data Review
		11/24/11	222	Second Technical Data Review
		10/27/11		Data Entry/Electronic Deliverable
		10/27/11		Case Narrative
		10/27/11	KBS	Electronic Deliverable Proof
		10/28/11	J.H.	Samples Analyzed within Holding Time Yes? <input type="checkbox"/> No? <input type="checkbox"/> <b>YES</b>
		10/28/11	J.H.	QA/QC Review
				Client in Possession of Data Electronic or Hard Copy
				Invoiced by Laboratory

Technical/Clerical Corrections, Signatures Needed, Problems, Etc	Date/Initials

Date package approved by:

Laboratory Manager

Date

Copy No. \_\_\_\_\_

Radiochemistry Services

**SECTION I**  
**CHAIN OF CUSTODY**

## USEPA

DateShipped: 9/29/2011

CarrierName: FedEx

AirbillNo: 797569617570

## CHAIN OF CUSTODY RECORD

John Bully Mine

Contact Name: Kristie Warr

Contact Phone: 713-985-6600

11-09167

No: TO0035110603-110929-0001

Cooler #:

Lab: Eberline Services

Lab Phone: 865-481-0683

Lab #	Sample #	Location	Analyses	Matrix	Collected	Num b Cont	Container	Preservative	MS/MSD
④	AR-01-31-110928	AR-01-31-110928	Gamma Spectroscopy	Soil	9/28/2011	1	16 oz jar	None	N
⑤	JB-11-31-110928	JB-11-31-110928	Gamma Spectroscopy	Soil	9/28/2011	1	16 oz jar	None	N
⑥	JB-30-31-110928	JB-30-31-110928	Gamma Spectroscopy	Soil	9/28/2011	1	16 oz jar	None	N
⑦	JB-41-31-110928	JB-41-31-110928	Gamma Spectroscopy	Soil	9/28/2011	1	16 oz jar	None	N
⑧	JB-41-32-110928	JB-41-32-110928	Gamma Spectroscopy	Soil	9/28/2011	1	16 oz jar	None	N
⑨	JB-48-31-110928	JB-48-31-110928	Gamma Spectroscopy	Soil	9/28/2011	1	16 oz jar	None	N
⑩	JB-67-31-110928	JB-67-31-110928	Gamma Spectroscopy	Soil	9/28/2011	1	16 oz jar	None	N
⑪	JB-68-31-110928	JB-68-31-110928	Gamma Spectroscopy	Soil	9/28/2011	1	16 oz jar	None	N
⑫	JBBKGD-E-31-110928	JBBKGD-E-31-110928	Gamma Spectroscopy	Soil	9/28/2011	1	16 oz jar	None	N
⑬	JBBKGD-S-31-110928	JBBKGD-S-31-110928	Gamma Spectroscopy	Soil	9/28/2011	1	16 oz jar	None	N
⑭	JBBKGD-W-31-110928	JBBKGD-W-31-110928	Gamma Spectroscopy	Soil	9/28/2011	1	16 oz jar	None	N
⑮	VTP-01-31-110928	VTP-01-31-110928	Gamma Spectroscopy	Soil	9/28/2011	1	16 oz jar	None	N

Special Instructions: Level IV Deliverable, standard TAT. HOLD Alpha Spec for Isotopic U and Isotopic Th ASTM 3972-90M until Gamma Spec results are required.

SAMPLES TRANSFERRED FROM  
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
12/samples	ER	9/29/11	John M. King	9/30/11	0830						

REC'D SEP 30 2011



# Internal Chain of Custody

Work Order #	11-09167
Lab Deadline	10/24/2011
Analysis	Gamma - Level 4
Sample Matrix	Soil/Solid

Comments	Sample Fraction	HP 210 / 270 Detector Activity	Storage Location
21 day ingrowth: Report Ac228, Bi214, K40, Pa234m, Pb212/214, Th234, Ti208, Ra226 from Bi214 & any positives.	04	659	E1.3
	05	115	E1.3
	06	63	E1.3
	07	60	E1.3
	08	66	E1.3
	09	62	E1.3
	10	62	E1.3
	11	88	E1.3
	12	74	E1.3
	13	51	E1.3
	14	40	E1.3
	15	289	E1.3

	Location (circle one)					Initials	Date
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room	0830 Keng Selis	10-3-11
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room	0920 Keng Selis	10-4-11
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room	0920 ←	10-4-11
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room	10/25/11 1140	
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room		
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room		
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room		
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room		
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room		
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room		
Received by	Sample Storage	Rough Prep	Prep	Separations	Count Room		
Relinquished by	Sample Storage	Rough Prep	Prep	Separations	Count Room		



**SECTION II**  
**SAMPLE ACKNOWLEDGEMENT**





**EBERLINE**  
SERVICES

## STANDARD OPERATING PROCEDURE

Sample Receiving

MP-001, Rev. 11  
Effective: 10/31/09  
Page 13 of 14

Eberline Services – Oak Ridge Laboratory

### SAMPLE RECEIPT CHECKLIST MP-001-2

WORK ORDER # **11-09167**

SAMPLE MATRIX/MATRICES:

(CIRCLE ONE OR BOTH)

AQUEOUS NON-AQUEOUS

(CIRCLE EITHER YES, NO, OR N/A)

WERE SAMPLES:

Received in good condition?	<u>Y</u>	N	
If aqueous, properly preserved	Y	N	<u>N/A</u>

WERE CHAIN OF CUSTODY SEALS:

Present on outside of package?	<u>Y</u>	N
Unbroken on outside of package?	<u>Y</u>	N
Present on samples?	<u>Y</u>	N
Unbroken on samples?	<u>Y</u>	N
Was chain of custody present upon sample receipt?	<u>Y</u>	N

IF THE RESPONSE TO ANY OF THE ABOVE IS NO, A DISCREPANT SAMPLE RECEIPT REPORT (DSR) HAS BEEN ISSUED.

REMARKS: (12) 500ml Jars of Soil

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

SIGNATURE: *Justin McK...*

DATE: 9/30/11

**SECTION III**  
**CASE NARRATIVE**



EBERLINE ANALYTICAL CORPORATION  
601 SCARBORO ROAD  
OAK RIDGE, TENNESSEE 37830  
PHONE (865) 481-0683  
FAX (865) 483-4621

EBS-OR-32909

October 28, 2011

Kristie Warr  
Weston Solutions, Inc.  
5599 San Felipe Suite 700  
Houston, TX 77056

CASE NARRATIVE  
Work Order # 11-09167-OR

SAMPLE RECEIPT

This work order contains twelve soil samples received 09/30/2011. These samples were analyzed by Gamma Spectroscopy.

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>CLIENT ID</u>	<u>LAB ID</u>
AR-01-31-110928	11-09167-04	JB-67-31-110928	11-09167-10
JB-11-31-110928	11-09167-05	JB-68-31-110928	11-09167-11
JB-30-31-110928	11-09167-06	JBBKGD-E-31-110928	11-09167-12
JB-41-31-110928	11-09167-07	JBBKGD-S-31-110928	11-09167-13
JB-41-32-110928	11-09167-08	JBBKGD-W-31-110928	11-09167-14
JB-48-31-110928	11-09167-09	VTP-01-31-110928	11-09167-15

ANALYTICAL METHODS

Gamma Spectroscopy was performed using Method LANL ER-130 Modified.

ANALYTICAL RESULTS

Combined Standard Uncertainty is reported at 2-sigma value.

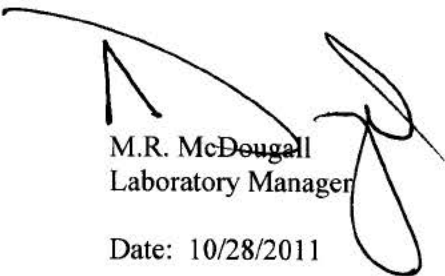
GAMMA SPECTROSCOPY

Samples were dried, homogenized and placed into appropriate gamma spectroscopy geometry containers. Samples were then sealed for 21 days to allow for ingrowth of Radon-222 and progeny. Samples were counted on High Purity Germanium (HPGe) gamma ray detectors. Energy lines from Lead-214 and Bismuth-214 were analyzed for determinations of Radium-226 activity.

Samples demonstrated acceptable results for all gamma-emitting radionuclides as reported. The method blank demonstrated acceptable results for all radionuclides as reported. Results for the Bismuth-214, Lead-212 and Lead-214 replicate demonstrated an acceptable relative percent difference and normalized difference. Results for the Cobalt-60 and Cesium-137 laboratory control sample demonstrated an acceptable percent recovery.

CERTIFICATION OF ACCURACY

I certify that this data report is in compliance with the terms and conditions of the Purchase Order, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the cognizant project manager or his/her designee to be accurate as verified by the following signature.



M.R. McDougall  
Laboratory Manager

Date: 10/28/2011

**SECTION IV**  
**ANALYTICAL RESULTS SUMMARY**

# Eberline Analytical Final Report of Analysis

Report To:

Kristie Warr  
Weston Solutions, Inc.  
5599 San Felipe Suite 700  
Houston, TX 77056

Work Order Details:

SDG: **11-09167**  
Purchase Order: 0070138  
Analysis Category: ENVIRONMENTAL  
Sample Matrix: SO

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
11-09167-01	LCS	KNOWN	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Cobalt-60	LANL ER-130 Modified	1.32E+02	5.20E+00			pCi/g
11-09167-01	LCS	KNOWN	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Cesium-137	LANL ER-130 Modified	8.25E+01	3.30E+00			pCi/g
11-09167-01	LCS	SPIKE	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Cobalt-60	LANL ER-130 Modified	1.33E+02	9.57E+00	1.18E+01	7.52E-01	pCi/g
11-09167-01	LCS	SPIKE	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Cesium-137	LANL ER-130 Modified	8.48E+01	8.77E+00	9.79E+00	6.12E-01	pCi/g
11-09167-02	MBL	BLANK	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	-2.77E-02	6.45E-02	6.45E-02	1.15E-01	pCi/g
11-09167-02	MBL	BLANK	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	1.28E-03	4.22E-02	4.22E-02	8.46E-02	pCi/g
11-09167-02	MBL	BLANK	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	-1.92E-02	1.84E-01	1.84E-01	3.95E-01	pCi/g
11-09167-02	MBL	BLANK	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	4.75E-01	1.83E+00	1.83E+00	3.78E+00	pCi/g
11-09167-02	MBL	BLANK	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	-9.28E-03	2.37E-02	2.37E-02	4.44E-02	pCi/g
11-09167-02	MBL	BLANK	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	-2.50E-02	3.89E-02	3.89E-02	6.69E-02	pCi/g
11-09167-02	MBL	BLANK	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	1.28E-03	4.22E-02	4.22E-02	8.46E-02	pCi/g
11-09167-02	MBL	BLANK	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	-1.19E-01	2.97E-01	2.97E-01	5.48E-01	pCi/g
11-09167-02	MBL	BLANK	09/30/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	2.95E-02	5.37E-02	5.37E-02	1.08E-01	pCi/g
11-09167-03	DUP	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	-1.75E-01	3.89E+00	3.89E+00	6.63E+00	pCi/g
11-09167-03	DUP	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	7.48E+02	4.13E+01	5.64E+01	2.99E+00	pCi/g
11-09167-03	DUP	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	1.73E+01	1.34E+01	1.34E+01	1.72E+01	pCi/g
11-09167-03	DUP	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	1.60E+02	1.13E+02	1.13E+02	1.92E+02	pCi/g
11-09167-03	DUP	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	6.97E+01	7.36E+00	8.18E+00	3.76E+00	pCi/g
11-09167-03	DUP	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	7.85E+02	6.34E+01	7.51E+01	3.48E+00	pCi/g
11-09167-03	DUP	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	7.48E+02	4.13E+01	5.64E+01	2.99E+00	pCi/g
11-09167-03	DUP	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	2.97E+02	4.22E+01	4.48E+01	2.85E+01	pCi/g
11-09167-03	DUP	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	5.75E+00	3.38E+00	3.39E+00	4.82E+00	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621



# Eberline Analytical

## Final Report of Analysis

Report To:

Kristie Warr  
Weston Solutions, Inc.  
5599 San Felipe Suite 700  
Houston, TX 77056

Work Order Details:

SDG: 11-09167  
Purchase Order: 0070138  
Analysis Category: ENVIRONMENTAL  
Sample Matrix: SO

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
11-09167-04	DO	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	4.17E+00	4.35E+00	4.36E+00	6.58E+00	pCi/g
11-09167-04	DO	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	7.52E+02	4.13E+01	5.65E+01	3.04E+00	pCi/g
11-09167-04	DO	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	1.97E+01	1.48E+01	1.49E+01	1.71E+01	pCi/g
11-09167-04	DO	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	5.61E+01	1.11E+02	1.11E+02	1.89E+02	pCi/g
11-09167-04	DO	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	7.06E+01	7.45E+00	8.28E+00	3.76E+00	pCi/g
11-09167-04	DO	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	7.84E+02	6.34E+01	7.51E+01	3.49E+00	pCi/g
11-09167-04	DO	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	7.52E+02	4.13E+01	5.65E+01	3.04E+00	pCi/g
11-09167-04	DO	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	4.73E+02	4.79E+01	5.37E+01	3.33E+01	pCi/g
11-09167-04	DO	AR-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	6.66E+00	3.41E+00	3.43E+00	4.84E+00	pCi/g
11-09167-05	TRG	JB-11-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	1.25E+00	4.71E-01	4.76E-01	6.42E-01	pCi/g
11-09167-05	TRG	JB-11-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	2.77E+01	1.72E+00	2.23E+00	3.11E-01	pCi/g
11-09167-05	TRG	JB-11-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	1.90E+01	2.92E+00	3.08E+00	1.71E+00	pCi/g
11-09167-05	TRG	JB-11-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	1.88E+01	1.25E+01	1.25E+01	2.26E+01	pCi/g
11-09167-05	TRG	JB-11-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	6.58E-01	1.43E-01	1.47E-01	3.24E-01	pCi/g
11-09167-05	TRG	JB-11-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	2.90E+01	2.05E+00	2.53E+00	3.59E-01	pCi/g
11-09167-05	TRG	JB-11-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	2.77E+01	1.72E+00	2.23E+00	3.11E-01	pCi/g
11-09167-05	TRG	JB-11-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	1.56E+01	4.19E+00	4.26E+00	4.37E+00	pCi/g
11-09167-05	TRG	JB-11-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	5.75E-01	1.68E-01	1.70E-01	4.82E-01	pCi/g
11-09167-06	TRG	JB-30-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	1.02E+00	2.28E-01	2.34E-01	2.46E-01	pCi/g
11-09167-06	TRG	JB-30-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	2.89E+00	2.75E-01	3.12E-01	1.33E-01	pCi/g
11-09167-06	TRG	JB-30-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	1.93E+01	2.29E+00	2.49E+00	6.04E-01	pCi/g
11-09167-06	TRG	JB-30-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	-9.24E-01	4.62E+00	4.62E+00	8.12E+00	pCi/g
11-09167-06	TRG	JB-30-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	9.98E-01	1.46E-01	1.55E-01	1.23E-01	pCi/g
11-09167-06	TRG	JB-30-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	2.94E+00	2.62E-01	3.02E-01	1.47E-01	pCi/g
11-09167-06	TRG	JB-30-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	2.89E+00	2.75E-01	3.12E-01	1.33E-01	pCi/g
11-09167-06	TRG	JB-30-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	3.22E+00	1.14E+00	1.15E+00	1.55E+00	pCi/g
11-09167-06	TRG	JB-30-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	7.80E-01	1.36E-01	1.42E-01	1.79E-01	pCi/g

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

# Eberline Analytical Final Report of Analysis

Report To:

Kristie Warr  
Weston Solutions, Inc.  
5599 San Felipe Suite 700  
Houston, TX 77056

Work Order Details:

SDG: **11-09167**  
Purchase Order: 0070138  
Analysis Category: ENVIRONMENTAL  
Sample Matrix: SO

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
11-09167-07	TRG	JB-41-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	1.09E+00	2.28E-01	2.34E-01	2.88E-01	pCi/g
11-09167-07	TRG	JB-41-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	2.41E+00	2.69E-01	2.96E-01	1.45E-01	pCi/g
11-09167-07	TRG	JB-41-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	2.11E+01	2.87E+00	3.07E+00	6.69E-01	pCi/g
11-09167-07	TRG	JB-41-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	-1.08E+00	5.39E+00	5.39E+00	9.36E+00	pCi/g
11-09167-07	TRG	JB-41-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	1.03E+00	1.50E-01	1.59E-01	1.24E-01	pCi/g
11-09167-07	TRG	JB-41-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	2.39E+00	2.48E-01	2.77E-01	1.51E-01	pCi/g
11-09167-07	TRG	JB-41-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	2.41E+00	2.69E-01	2.96E-01	1.45E-01	pCi/g
11-09167-07	TRG	JB-41-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	2.05E+00	1.36E+00	1.36E+00	1.55E+00	pCi/g
11-09167-07	TRG	JB-41-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	8.89E-01	2.45E-01	2.49E-01	3.86E-01	pCi/g
11-09167-08	TRG	JB-41-32-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	1.13E+00	2.53E-01	2.60E-01	2.57E-01	pCi/g
11-09167-08	TRG	JB-41-32-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	2.32E+00	2.92E-01	3.15E-01	1.50E-01	pCi/g
11-09167-08	TRG	JB-41-32-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	1.92E+01	2.49E+00	2.68E+00	6.33E-01	pCi/g
11-09167-08	TRG	JB-41-32-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	1.17E+00	5.23E+00	5.23E+00	9.65E+00	pCi/g
11-09167-08	TRG	JB-41-32-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	1.11E+00	1.57E-01	1.67E-01	1.22E-01	pCi/g
11-09167-08	TRG	JB-41-32-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	2.54E+00	2.59E-01	2.90E-01	1.53E-01	pCi/g
11-09167-08	TRG	JB-41-32-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	2.32E+00	2.92E-01	3.15E-01	1.50E-01	pCi/g
11-09167-08	TRG	JB-41-32-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	2.48E+00	2.06E+00	2.07E+00	1.67E+00	pCi/g
11-09167-08	TRG	JB-41-32-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	7.22E-01	1.67E-01	1.71E-01	2.21E-01	pCi/g
11-09167-09	TRG	JB-48-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	1.01E+00	2.17E-01	2.23E-01	3.15E-01	pCi/g
11-09167-09	TRG	JB-48-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	3.86E+00	3.40E-01	3.93E-01	1.41E-01	pCi/g
11-09167-09	TRG	JB-48-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	2.22E+01	2.67E+00	2.90E+00	6.64E-01	pCi/g
11-09167-09	TRG	JB-48-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	2.68E+00	5.41E+00	5.41E+00	9.91E+00	pCi/g
11-09167-09	TRG	JB-48-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	1.12E+00	1.62E-01	1.72E-01	1.21E-01	pCi/g
11-09167-09	TRG	JB-48-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	3.79E+00	3.20E-01	3.74E-01	1.63E-01	pCi/g
11-09167-09	TRG	JB-48-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	3.86E+00	3.40E-01	3.93E-01	1.41E-01	pCi/g
11-09167-09	TRG	JB-48-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	1.21E+00	1.07E+00	1.07E+00	1.85E+00	pCi/g
11-09167-09	TRG	JB-48-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	8.75E-01	1.49E-01	1.55E-01	1.99E-01	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

# Eberline Analytical Final Report of Analysis

Report To:

Kristie Warr  
Weston Solutions, Inc.  
5599 San Felipe Suite 700  
Houston, TX 77056

Work Order Details:

SDG: **11-09167**  
Purchase Order: 0070138  
Analysis Category: ENVIRONMENTAL  
Sample Matrix: SO

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
11-09167-10	TRG	JB-67-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	1.01E+00	2.10E-01	2.16E-01	3.26E-01	pCi/g
11-09167-10	TRG	JB-67-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	4.27E+00	3.87E-01	4.45E-01	1.51E-01	pCi/g
11-09167-10	TRG	JB-67-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	1.95E+01	2.62E+00	2.80E+00	6.82E-01	pCi/g
11-09167-10	TRG	JB-67-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	4.34E-01	5.48E+00	5.48E+00	9.70E+00	pCi/g
11-09167-10	TRG	JB-67-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	1.67E-01	1.33E-01	1.33E-01	1.38E-01	pCi/g
11-09167-10	TRG	JB-67-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	4.42E+00	3.77E-01	4.40E-01	1.48E-01	pCi/g
11-09167-10	TRG	JB-67-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	4.27E+00	3.87E-01	4.45E-01	1.51E-01	pCi/g
11-09167-10	TRG	JB-67-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	2.51E+00	1.54E+00	1.55E+00	1.72E+00	pCi/g
11-09167-10	TRG	JB-67-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	1.08E+00	2.28E-01	2.34E-01	3.94E-01	pCi/g
11-09167-11	TRG	JB-68-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	9.11E-01	7.59E-01	7.61E-01	1.04E+00	pCi/g
11-09167-11	TRG	JB-68-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	1.31E+01	1.13E+00	1.32E+00	4.16E-01	pCi/g
11-09167-11	TRG	JB-68-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	2.01E+01	3.40E+00	3.55E+00	2.01E+00	pCi/g
11-09167-11	TRG	JB-68-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	4.91E+00	1.42E+01	1.42E+01	2.59E+01	pCi/g
11-09167-11	TRG	JB-68-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	9.66E-01	2.48E-01	2.53E-01	3.54E-01	pCi/g
11-09167-11	TRG	JB-68-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	1.28E+01	1.22E+00	1.38E+00	4.52E-01	pCi/g
11-09167-11	TRG	JB-68-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	1.31E+01	1.13E+00	1.32E+00	4.16E-01	pCi/g
11-09167-11	TRG	JB-68-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	1.04E+01	5.03E+00	5.06E+00	4.44E+00	pCi/g
11-09167-11	TRG	JB-68-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	7.28E-01	2.46E-01	2.49E-01	6.20E-01	pCi/g
11-09167-12	TRG	JBBKGD-E-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	7.46E-01	1.86E-01	1.90E-01	2.74E-01	pCi/g
11-09167-12	TRG	JBBKGD-E-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	1.32E+00	1.78E-01	1.90E-01	1.11E-01	pCi/g
11-09167-12	TRG	JBBKGD-E-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	1.49E+01	2.10E+00	2.24E+00	4.94E-01	pCi/g
11-09167-12	TRG	JBBKGD-E-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	-1.30E+00	5.14E+00	5.14E+00	9.00E+00	pCi/g
11-09167-12	TRG	JBBKGD-E-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	8.83E-01	1.30E-01	1.37E-01	9.77E-02	pCi/g
11-09167-12	TRG	JBBKGD-E-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	1.38E+00	1.70E-01	1.84E-01	1.13E-01	pCi/g
11-09167-12	TRG	JBBKGD-E-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	1.32E+00	1.78E-01	1.90E-01	1.11E-01	pCi/g
11-09167-12	TRG	JBBKGD-E-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	4.67E-01	8.74E-01	8.74E-01	1.55E+00	pCi/g
11-09167-12	TRG	JBBKGD-E-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	6.55E-01	1.37E-01	1.41E-01	1.87E-01	pCi/g

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 Fax 865/483-4621



# Eberline Analytical Final Report of Analysis

Report To:

Kristie Warr  
Weston Solutions, Inc.  
5599 San Felipe Suite 700  
Houston, TX 77056

Work Order Details:

SDG:

11-09167

Purchase Order:

0070138

Analysis Category:

ENVIRONMENTAL

Sample Matrix:

SO

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
11-09167-13	TRG	JBBKGD-S-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	1.06E+00	2.34E-01	2.40E-01	2.45E-01	pCi/g
11-09167-13	TRG	JBBKGD-S-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	2.02E+00	2.25E-01	2.48E-01	1.40E-01	pCi/g
11-09167-13	TRG	JBBKGD-S-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	2.24E+01	2.59E+00	2.84E+00	5.89E-01	pCi/g
11-09167-13	TRG	JBBKGD-S-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	-1.89E+00	4.53E+00	4.54E+00	7.84E+00	pCi/g
11-09167-13	TRG	JBBKGD-S-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	1.07E+00	1.44E-01	1.54E-01	1.14E-01	pCi/g
11-09167-13	TRG	JBBKGD-S-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	2.08E+00	2.09E-01	2.35E-01	1.37E-01	pCi/g
11-09167-13	TRG	JBBKGD-S-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	2.02E+00	2.25E-01	2.48E-01	1.40E-01	pCi/g
11-09167-13	TRG	JBBKGD-S-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	8.08E-01	9.39E-01	9.40E-01	1.64E+00	pCi/g
11-09167-13	TRG	JBBKGD-S-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	9.64E-01	1.55E-01	1.63E-01	1.88E-01	pCi/g
11-09167-14	TRG	JBBKGD-W-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	8.29E-01	2.80E-01	2.83E-01	4.43E-01	pCi/g
11-09167-14	TRG	JBBKGD-W-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	1.74E+00	2.10E-01	2.28E-01	1.21E-01	pCi/g
11-09167-14	TRG	JBBKGD-W-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	1.79E+01	2.50E+00	2.67E+00	6.31E-01	pCi/g
11-09167-14	TRG	JBBKGD-W-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	6.20E-01	4.91E+00	4.91E+00	8.81E+00	pCi/g
11-09167-14	TRG	JBBKGD-W-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	8.24E-01	1.33E-01	1.39E-01	1.09E-01	pCi/g
11-09167-14	TRG	JBBKGD-W-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	1.74E+00	1.81E-01	2.02E-01	1.26E-01	pCi/g
11-09167-14	TRG	JBBKGD-W-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	1.74E+00	2.10E-01	2.28E-01	1.21E-01	pCi/g
11-09167-14	TRG	JBBKGD-W-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	1.13E+00	8.69E-01	8.71E-01	1.52E+00	pCi/g
11-09167-14	TRG	JBBKGD-W-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	8.42E-01	2.37E-01	2.41E-01	3.49E-01	pCi/g
11-09167-15	TRG	VTP-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Actinium-228	LANL ER-130 Modified	3.37E+00	2.94E+00	2.95E+00	3.60E+00	pCi/g
11-09167-15	TRG	VTP-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Bismuth-214	LANL ER-130 Modified	2.07E+02	1.21E+01	1.61E+01	1.57E+00	pCi/g
11-09167-15	TRG	VTP-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Potassium-40	LANL ER-130 Modified	1.80E+01	8.84E+00	8.89E+00	9.08E+00	pCi/g
11-09167-15	TRG	VTP-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Protactinium-234m	LANL ER-130 Modified	-8.12E+00	5.79E+01	5.79E+01	9.91E+01	pCi/g
11-09167-15	TRG	VTP-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-212	LANL ER-130 Modified	2.31E+00	1.04E+00	1.05E+00	1.43E+00	pCi/g
11-09167-15	TRG	VTP-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Lead-214	LANL ER-130 Modified	2.14E+02	1.75E+01	2.06E+01	1.80E+00	pCi/g
11-09167-15	TRG	VTP-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Radium-226	LANL ER-130 Modified	2.07E+02	1.21E+01	1.61E+01	1.57E+00	pCi/g
11-09167-15	TRG	VTP-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thorium-234	LANL ER-130 Modified	2.08E+01	1.34E+01	1.35E+01	1.83E+01	pCi/g
11-09167-15	TRG	VTP-01-31-110928	09/28/11 00:00	9/30/2011	10/25/2011	11-09167	Thallium-208	LANL ER-130 Modified	4.34E+00	1.77E+00	1.78E+00	2.58E+00	pCi/g

CU=Counting Uncertainty; CSU=Combined Standard Uncertainty (2-sigma); MDA=Minimal Detected Activity; LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original



EBERLINE ANALYTICAL CORPORATION

601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

**SECTION V**  
**ANALYTICAL STANDARD**

**CERTIFICATE OF CALIBRATION**

Standard Radionuclide Source

GAS - 1102

**83913-416**

Sand in 16 oz. PP Taral Jar Filled to Top

**Customer:** Eberline Services / Eberline Analytical Corp.

**P.O. No.:** 6705, Item 8

**Reference Date:** 01-Jan-2011

 12:00 PM EST **Grams of Master Source:** 0.016810

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solutions. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Eckert & Ziegler Analytics (EZA) maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Revision 1, February, 1979, and compliance with ANSI N42.22-1995, "Traceability of Radioactive Sources to NIST." EZA is accredited by the Health Physics Society (HPS) for the production of NIST-traceable sources, and this source was produced in accordance with the HPS accreditation requirements. Customers may report any concerns with the accreditation program to the HPS Secretariat, 1313 Dolley Madison Blvd., Ste. 402, McLean, VA 22101.

Nuclide	Gamma-Ray Energy (keV)	Half-Life, Days	Master Source* $\mu\text{ps/gram}$	This Source $\mu\text{ps}$	Uncertainty, %			Calibration Method
					$u_A$	$u_B$	U	
Am-241	59.5	1.580E+05	—	2.075E+03	0.1	1.7	3.5	4 $\pi$ LS
Cd-109	88.0	4.626E+02	1.697E+05	2.853E+03	0.8	2.3	4.9	HPGe
Co-57	122.1	2.718E+02	8.711E+04	1.464E+03	0.5	2.0	4.1	HPGe
Ce-139	165.9	1.376E+02	1.247E+05	2.096E+03	0.5	1.9	3.9	HPGe
Hg-203	279.2	4.661E+01	2.753E+05	4.628E+03	0.4	1.9	3.9	HPGe
Sn-113	391.7	1.151E+02	1.769E+05	2.974E+03	0.5	1.9	3.9	HPGe
Cs-137	661.7	1.098E+04	1.109E+05	1.864E+03	0.7	1.9	4.0	HPGe
Y-88	898.0	1.066E+02	4.224E+05	7.101E+03	0.5	1.9	3.9	HPGe
Co-60	1173.2	1.925E+03	2.142E+05	3.601E+03	0.6	1.9	4.0	HPGe
Co-60	1332.5	1.925E+03	2.143E+05	3.602E+03	0.6	1.9	4.0	HPGe
Y-88	1836.1	1.066E+02	4.472E+05	7.517E+03	0.5	1.9	3.9	HPGe

\* Master Source refers to Analytics' 8-isotope mixture which is calibrated quarterly.

**Calibration Methods:** 4 $\pi$  LS - 4  $\pi$  Liquid Scintillation Counting, HPGe - High Purity Germanium Gamma-Ray Spectrometer, IC - Ionization Chamber. **Uncertainty:** U - Relative expanded uncertainty,  $k = 2$ . See NIST Technical Note 1297, "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results."

(Certificate continued on reverse side)

## CERTIFICATE OF CALIBRATION

### Standard Radionuclide Source

**GAS-1002**
**81341-416**
**Sand in 16 oz PP Taral Jar Filled to Top**
**Customer:** Eberline Services / Eberline Analytical Corp. / Oak Ridge

**P.O. No.:** 5964, Item 6

**Reference Date:** 01-Jan-2010      **12:00 PM EST**      **Grams of Master Source:** 0.017446

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solutions. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Eckert & Ziegler Analytics (EZA) maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Revision 1, February, 1979, and compliance with ANSI N42.22-1995, "Traceability of Radioactive Sources to NIST." EZA is accredited by the Health Physics Society (HPS) for the production of NIST-traceable sources, and this source was produced in accordance with the HPS accreditation requirements. Customers may report any concerns with the accreditation program to the HPS Secretariat, 1313 Dolley Madison Blvd., Ste. 402, McLean, VA 22101.

Nuclide	Gamma-Ray Energy (keV)	Half-Life, Days	Master Source* yps/gram	This Source yps	Uncertainty, %			Calibration Method
					Type	$u_A$	$u_B$	U
Am-241	59.5	1.580E+05	—	2.020E+03	0.1	1.7	3.5	4 $\pi$ LS
Cd-109	88.0	4.626E+02	1.606E+05	2.802E+03	0.4	2.3	4.7	HPGe
Co-57	122.1	2.718E+02	8.471E+04	1.478E+03	0.5	2.0	4.1	HPGe
Ce-139	165.9	1.376E+02	1.209E+05	2.109E+03	0.4	1.9	3.9	HPGe
Hg-203	279.2	4.661E+01	2.726E+05	4.756E+03	0.4	1.9	3.9	HPGe
Sn-113	391.7	1.151E+02	1.672E+05	2.917E+03	0.5	1.9	3.9	HPGe
Cs-137	661.7	1.098E+04	1.096E+05	1.912E+03	0.6	1.9	4.0	HPGe
Y-88	898.0	1.066E+02	4.077E+05	7.113E+03	0.4	1.9	3.9	HPGe
Co-60	1173.2	1.925E+03	2.055E+05	3.585E+03	0.5	1.9	3.9	HPGe
Co-60	1332.5	1.925E+03	2.056E+05	3.587E+03	0.7	1.9	4.0	HPGe
Y-88	1836.1	1.066E+02	4.308E+05	7.516E+03	0.5	1.9	3.9	HPGe

\* Master Source refers to Analytics' 8-isotope mixture which is calibrated quarterly.

**Calibration Methods:** 4 $\pi$  LS - 4 pi Liquid Scintillation Counting, HPGe - High Purity Germanium Gamma-Ray Spectrometer, IC - Ionization Chamber. **Uncertainty:** U - Relative expanded uncertainty, k = 2. See NIST Technical Note 1297, "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results."

(Certificate continued on reverse side)



**Comments:**

260 mL / 260 g of pulverized soil.

This standard will expire one year after the reference date.

Source Prepared by:

M. I. Taskaeva  
M. I. Taskaeva, Radiochemist

QA Approved:

J. D. McCorvey  
J. D. McCorvey, QA Manager Alternate

Date:

1/29/10





**SECTION VI**  
**QUALITY CONTROL SAMPLE RESULTS SUMMARY**

WO	Analysis	Run	Activity Units	Aliquot Units	Client Name
11-09167	Gamma	1	pCi	g	Weston Solutions, Inc.

### Laboratory Control Sample

Analyte	Normalized Difference	LCS Measured	CSU Measured	LCS Expected	Uncert. Expected	Known	Known Error	Result	CSU	Standard ID	Standard ACT (dpm)	Standard Error	Standard Added (g)
CO-60	0.21	100.99%	8.84%	100.00%	3.95%	1.32E+02	5.20E+00	1.33E+02	1.18E+01	GAS-1002	1.32E+02	5.20E+00	7.36E+02
CS-137	0.46	102.82%	11.54%	100.00%	4.00%	8.25E+01	3.30E+00	8.48E+01	9.79E+00	GAS-1002	8.25E+01	3.30E+00	7.36E+02

### Matrix Spike

Analyte	Normalized Difference	MS Actual % Rec	Expected MS Result	Expected MS Uncert	Actual MS Result	Actual MS CSU	Sample Result	Sample CSU	Sample Aliquot	Standard ID	Standard ACT (dpm)	Standard Error %	Standard Added (g)

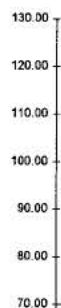
### Replicate Sample

### QC Summary

Analyte	Normalized Difference	RPD	Original Result	Original CSU	Replicate Result	Replicate CSU	LCS Relative Bias	LCS % R	LCS ND	MS % R	MS ND	Rep RPD	Rep ND
BI-214	0.10	0.52	7.52E+02	5.65E+01	7.48E+02	5.64E+01	1.01	OK	OK	<CS-137	BI-214>	NA	
PB-212	0.15	1.31	7.06E+01	8.28E+00	6.97E+01	8.18E+00	1.03	OK	OK	<CO-60	PB-212>	NA	OK
PB-214	0.01	0.08	7.84E+02	7.51E+01	7.85E+02	7.51E+01					PB-214>	NA	OK

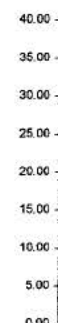
WO	Analysis	Run	Activity Units	Aliquot Units	Client Name
11-09167	Gamma	1	pCi	g	Weston Solutions, Inc.

### LCS % Recovery



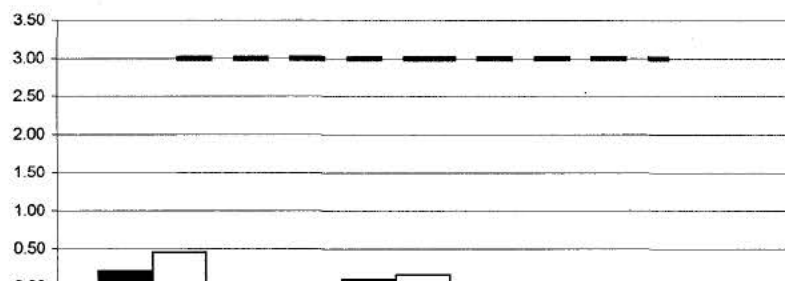
	CO-60	CS-137
- Lower Error	88.21	87.28
- Upper Error	113.78	118.37
◆ %R	100.99	102.82
- LCL	80	80
- Mean	100	100
- UCL	120	120

### Replicate Sample RPD



	BI-214	PB-212	PB-214
- Lower Error	0.54	1.39	0.08
- Upper Error	0.50	1.23	0.07
◆ RPD	0.52	1.31	0.08
- CL	35	35	35

### Normalized Difference



	LCS ND	REP ND	MS ND
■ CO-60	0.21	0.10	0.00
□ CS-137	0.46	0.15	0.00
□	0.00	0.00	0.00
- UCL	3	3	3

### No Matrix Spike

**SECTION VII**  
**LABORATORY TECHNICIAN'S NOTES**  
**&**  
**RUN LOGS**

DATE	Sample #	Client	Load Time	CT Time	Analysis	Tech
10/21/11	See Cal	LAD	0554	2 Ltr	AA	d
10/21/11	GAW-11	LAD	0607	15 min	f	d
10/21/11	GA 5-1102	LAD	0630	15 min	f	d
10/21/11	GA 5-1101	LAD	0654	15 min	f	d
10/21/11	1110079-03	UCOR	0905	2 hr	f	d
10/21/11	1110079-04	UCOR	1107	2 hr	f	d
10/21/11	1110070-03	UCOR	1308	2 hr	Y	ICB
10/21/11	1110070-04	UCOR	1508	2 hrs	Y	ICB
10/23/11	Chamber Bkgd	Lab	1041	12 hr	Y	AG
10/24/11	GA 5-1101	LAD	0514	15 min	f	d
10/24/11	Daily BLEND	LAD	0534	15 min	f	d
10/24/11	GA 5-11	LAD	0559	15 min	f	d
10/24/11	GA 5-1102	LAD	0618	15 min	f	d
10/24/11	1110094-03	UCOR	0719	2 hr	f	d
10/24/11	1110094-04	UCOR	0923	2 hr	f	d
10/24/11	1110085-09	GeoSyntec	1124	2 hr	f	d
10/24/11	1110085-10	GeoSyntec	1226	2 hr	f	KB
10/24/11	1110085-11	GeoSyntec	1728	2 hr	f	d
10/24/11	1110088-03	GeoSyntec	1429	1 hr	Y	ICB
10/24/11	1110088-04	GeoSyntec	1530	1 hr	Y	ICB
10/24/11	1110109-03	Fusion Tech	1632	30 min	Y	ICB
10/24/11	1110109-04	Fusion Tech	1702	30 min	Y	ICB
10/24/11	1110088-11	GeoSyntec	1733	1 hr	Y	ICB
10/24/11	1110088-15	GeoSyntec	1834	1 hr	Y	ICB
10/25/11	GA 5-1101	LAD	0514	15 min	f	d
10/25/11	GA 5-1102	LAD	0534	15 min	f	d
10/25/11	GAW-11	LAD	0554	15 min	f	d
10/25/11	GA 5-1102	LAD	0616	15 min	f	d
10/25/11	1110088-16	GeoSyntec	0640	2 hr	f	d
10/25/11	1109167-06	Weston	0747	2 hr	f	d
10/25/11	1109167-09	Weston	0829	2 hr	f	d
10/25/11	1109167-13	Weston	0855	2 hr	f	d

DATE	Sample #	Client	Load Time	CT Time	Analysis	Test
10/23/14	Chamber Bldg 1	Lab	1040	12 hr	-8	AS
10/24/14	GA5-1102	LATB	0515	18 min	✓	d
10/24/14	GA5-1101	LATB	0538	15 min	✓	d
10/24/14	Daily Bldg	LATB	0559	15 min	✓	d
10/24/14	GA5-11	LATB	0618	15 min	✓	d
10/24/14	1110084-01	Ulor	0721	30 min	✓	d
10/24/14	1110085-07	GeoSyntec	1007	2L	✓	d
10/24/14	1110085-04	GeoSyntec	1117	2L	✓	d
10/24/14	1110085-11	GeoSyntec	1221	2L	✓	KB
10/24/14	1110085-14	GeoSyntec	1725	2L	✓	d
10/24/11	1110088-05	GeoSyntec	1430	1 hr	✓	10B
10/24/11	1110088-07	GeoSyntec	1532	1 hr	✓	10B
10/24/11	1110109-05	FusionTech	1635	30 min	✓	10B
10/24/11	1110088-09	GeoSyntec	1707	1 hr	✓	10B
10/24/11	1110088-12	GeoSyntec	1810	1 hr	✓	10B
10/25/14	GA5-1102	LATB	0514	15 min	✓	d
10/25/14	GA5-1101	LATB	0535	15 min	✓	d
10/25/14	Daily Bldg	LATB	0554	15 min	✓	d
10/25/14	GA5-11	LATB	0617	15 min	✓	d
10/25/14	1110088-18	GeoSyntec	0641	2L	✓	d
10/25/14	1105167-07	Weston	0744	2L	✓	d
10/25/14	1105167-10	Weston	0850	2L	✓	d
10/25/14	1105167-14	Weston	0936	2L	✓	d

Gen

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DATE	Sample#	Client	Load Time	CT Time	Analysis	Tech
10/24/11	1110088-14	GeoSynTec	1811	1hr	Y	RB
10/25/11	GAW-11	LATB	0515	15min	J	C
10/25/11	GRAS-1102	LATB	0538	15min	-H	C
10/25/11	GRAS-1101	LATB	0558	15min	H	C
10/25/11	Daily Blends	LATB	0612	15min	H	C
10/25/11	GRAS-1101	LATB	0637	15min	H	C
10/25/11	1109167-05	Weston Sol.	0658	2L	H	C
10/25/11	1109167-08	Weston	0727	2L	H	C
10/25/11	1109167-12	Weston	0902	2L	H	C
10/25/11	1109167-01	Weston	1003	20min	H	C
10/25/11	1109167-02	Weston	1037	2L	H	C



DATE	Sample #	Client	Load Time	CT Time	Analysis	Tech
10/21/11	Daily Bldg	LATB	0525	15min	✓	d
10/21/11	GAW-11	LATB	0547	15min	✓	d
10/21/11	GA5-1102	LATB	0609	15min	✓	d
10/21/11	GA5-1101	LATB	0632	15min	✓	d
10/21/11	1110035-02	Ucore	0908	2hr	✓	d
10/21/11	1110055-02	Ucore	1108	2hr	✓	d
10/21/11	1110070-02	Ucore	1312	2hr	✓	d
10/23/11	Chamber Bldg	Lab	1038	12hr	✓	AG
10/24/11	Daily Bldg	LATB	0516	15min	✓	d
10/24/11	GAW-11	LATB	0579	15min	✓	d
10/24/11	GA5-1102	LATB	0600	15min	✓	d
10/24/11	GA5-1101	LATB	0619	15min	✓	d
10/24/11	1110085-01	Geosyntec	1005	2hr	✓	d
10/24/11	1110085-02	Geosyntec	1114	2hr	✓	d
10/24/11	1110085-01	Geosyntec	1322	70min	✓	d
10/24/11	1110085-02	Geosyntec	1220	2hr	✓	KB
10/24/11	1110088-01	Geosyntec	1354	30min	✓	KB
10/24/11	1110088-02	Geosyntec	1425	1hr	✓	KB
10/24/11	1110088-13	Geosyntec	1527	1hr	✓	KB
10/24/11	1110109-01	FusionTech	1633	30min	✓	KB
10/24/11	1110088-17	Geosyntec	1705	1hr	✓	KB
10/25/11	Daily Bldg	LATB	0515	15min	✓	d
10/25/11	GAW-11	LATB	0536	15min	✓	d
10/25/11	GA5-1102	LATB	0555	15min	✓	d
10/25/11	GA5-1101	LATB	0618	15min	✓	d
10/25/11	1109167-03	Weston	0647	2hr	✓	d
10/25/11	1109167-04	Weston	0748	2hr	✓	d
10/25/11	1109167-11	Weston	0852	2hr	✓	d
10/25/11	1109167-15	Weston	0957	2hr	✓	d



**SECTION VIII**  
**ANALYTICAL DATA (GAMMA SPECTROSCOPY)**

**11-09167**  
**Gamma**  
Run 1

Work Order	11-09167	Internal Fraction	Sample Desc	Client ID	Login CPM	Sample Date	Sample Aliquot
Analysis Code	Gamma	01	LCS	LCS		09/30/11 00:00	1.0000E+00
Run	1	02	MBL	BLANK		09/30/11 00:00	1.0000E+00
Date Received	9/30/2011	03	DUP	AR-01-31-110928	659	09/28/11 00:00	4.2294E+02
Lab Deadline	10/24/2011	04	DO	AR-01-31-110928	659	09/28/11 00:00	4.2294E+02
Client	Weston Solutions, Inc.	05	TRG	JB-11-31-110928	115	09/28/11 00:00	5.6851E+02
Project	0070138 U Mines	06	TRG	JB-30-31-110928	63	09/28/11 00:00	5.6987E+02
Report Level	4	07	TRG	JB-41-31-110928	60	09/28/11 00:00	5.4803E+02
Activity Units	pCi	08	TRG	JB-41-32-110928	66	09/28/11 00:00	5.6975E+02
Aliquot Units	g	09	TRG	JB-48-31-110928	62	09/28/11 00:00	5.5169E+02
Matrix	SO	10	TRG	JB-67-31-110928	62	09/28/11 00:00	5.7613E+02
Method	LANL ER-130 Modified	11	TRG	JB-68-31-110928	88	09/28/11 00:00	6.0554E+02
Instrument Type	Gamma Spectroscopy	12	TRG	JBBKGD-E-31-110928	74	09/28/11 00:00	6.1580E+02
Radiometric Tracer		13	TRG	JBBKGD-S-31-110928	51	09/28/11 00:00	5.4370E+02
Radiometric Sol#		14	TRG	JBBKGD-W-31-110928	40	09/28/11 00:00	5.8098E+02
Tracer Act (dpm/g)		15	TRG	VTP-01-31-110928	289	09/28/11 00:00	4.3394E+02
Carrier							
Carrier Conc (mg/ml)							



Internal Fraction	Sample Desc	Rough Prep Date	Rough Prep By	Prep Date	Prep By	Sep t0 Date/Time	Sep t0 By	Sep t1 Date/Time	Sep t1 By
01	LCS								
02	MBL								
03	DUP								
04	DO	10/04/11 07:54	KSALLINGS						
05	TRG	10/04/11 07:54	KSALLINGS						
06	TRG	10/04/11 07:54	KSALLINGS						
07	TRG	10/04/11 07:54	KSALLINGS						
08	TRG	10/04/11 07:54	KSALLINGS						
09	TRG	10/04/11 07:54	KSALLINGS						
10	TRG	10/04/11 07:54	KSALLINGS						
11	TRG	10/04/11 07:54	KSALLINGS						
12	TRG	10/04/11 07:54	KSALLINGS						
13	TRG	10/04/11 07:54	KSALLINGS						
14	TRG	10/04/11 07:54	KSALLINGS						
15	TRG	10/04/11 07:54	KSALLINGS						

Preliminary Data Report & Analytical Calculations  
**Work Order: 11-09167-Gamma-1**

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LSC Known	LCS %R	LCS Flag	RPD Flag	Sample Date	Sample Aliquot	Counting Date/Time	Identified
01	CO-60	LCS	LCS	pCi/g	1.33E+02	9.57E+00	7.52E-01	1.32E+02	100.99	OK		09/30/11 00:00	1.00E+00	10/25/11 10:03	YES
01	CS-137	LCS	LCS	pCi/g	8.48E+01	8.77E+00	6.12E-01	8.25E+01	102.82	OK		09/30/11 00:00	1.00E+00	10/25/11 10:03	YES
02	AC-228	MBL	BLANK	pCi/g	-2.77E-02	6.45E-02	1.15E-01					09/30/11 00:00	1.00E+00	10/25/11 10:37	NO
02	BI-214	MBL	BLANK	pCi/g	1.28E-03	4.22E-02	8.46E-02					09/30/11 00:00	1.00E+00	10/25/11 10:37	NO
02	K-40	MBL	BLANK	pCi/g	-1.92E-02	1.84E-01	3.95E-01					09/30/11 00:00	1.00E+00	10/25/11 10:37	NO
02	PA-234M	MBL	BLANK	pCi/g	4.75E-01	1.83E+00	3.78E+00					09/30/11 00:00	1.00E+00	10/25/11 10:37	NO
02	PB-212	MBL	BLANK	pCi/g	-9.28E-03	2.37E-02	4.44E-02					09/30/11 00:00	1.00E+00	10/25/11 10:37	NO
02	PB-214	MBL	BLANK	pCi/g	-2.50E-02	3.89E-02	6.69E-02					09/30/11 00:00	1.00E+00	10/25/11 10:37	NO
02	RA-226	MBL	BLANK	pCi/g	1.28E-03	4.22E-02	8.46E-02					09/30/11 00:00	1.00E+00	10/25/11 10:37	NO
02	TH-234	MBL	BLANK	pCi/g	-1.19E-01	2.97E-01	5.48E-01					09/30/11 00:00	1.00E+00	10/25/11 10:37	NO
02	TL-208	MBL	BLANK	pCi/g	2.95E-02	5.37E-02	1.08E-01					09/30/11 00:00	1.00E+00	10/25/11 10:37	NO
03	AC-228	DUP	AR-01-31-110928	pCi/g	-1.75E-01	3.89E+00	6.63E+00					09/28/11 00:00	4.23E+02	10/25/11 06:43	NO
03	BI-214	DUP	AR-01-31-110928	pCi/g	7.48E+02	4.13E+01	2.99E+00				NA	09/28/11 00:00	4.23E+02	10/25/11 06:43	YES
03	K-40	DUP	AR-01-31-110928	pCi/g	1.73E+01	1.34E+01	1.72E+01					09/28/11 00:00	4.23E+02	10/25/11 06:43	YES
03	PA-234M	DUP	AR-01-31-110928	pCi/g	1.60E+02	1.13E+02	1.92E+02					09/28/11 00:00	4.23E+02	10/25/11 06:43	NO
03	PB-212	DUP	AR-01-31-110928	pCi/g	6.97E+01	7.36E+00	3.76E+00				NA	09/28/11 00:00	4.23E+02	10/25/11 06:43	NO
03	PB-214	DUP	AR-01-31-110928	pCi/g	7.85E+02	6.34E+01	3.48E+00				NA	09/28/11 00:00	4.23E+02	10/25/11 06:43	YES
03	RA-226	DUP	AR-01-31-110928	pCi/g	7.48E+02	4.13E+01	2.99E+00					09/28/11 00:00	4.23E+02	10/25/11 06:43	YES
03	TH-234	DUP	AR-01-31-110928	pCi/g	2.97E+02	4.22E+01	2.85E+01					09/28/11 00:00	4.23E+02	10/25/11 06:43	YES
03	TL-208	DUP	AR-01-31-110928	pCi/g	5.75E+00	3.38E+00	4.82E+00					09/28/11 00:00	4.23E+02	10/25/11 06:43	NO
04	AC-228	DO	AR-01-31-110928	pCi/g	4.17E+00	4.35E+00	6.58E+00					09/28/11 00:00	4.23E+02	10/25/11 07:48	NO
04	BI-214	DO	AR-01-31-110928	pCi/g	7.52E+02	4.13E+01	3.04E+00					09/28/11 00:00	4.23E+02	10/25/11 07:48	YES
04	K-40	DO	AR-01-31-110928	pCi/g	1.97E+01	1.48E+01	1.71E+01					09/28/11 00:00	4.23E+02	10/25/11 07:48	YES
04	PA-234M	DO	AR-01-31-110928	pCi/g	5.61E+01	1.11E+02	1.89E+02					09/28/11 00:00	4.23E+02	10/25/11 07:48	NO
04	PB-212	DO	AR-01-31-110928	pCi/g	7.06E+01	7.45E+00	3.76E+00					09/28/11 00:00	4.23E+02	10/25/11 07:48	NO
04	PB-214	DO	AR-01-31-110928	pCi/g	7.84E+02	6.34E+01	3.49E+00					09/28/11 00:00	4.23E+02	10/25/11 07:48	YES
04	RA-226	DO	AR-01-31-110928	pCi/g	7.52E+02	4.13E+01	3.04E+00					09/28/11 00:00	4.23E+02	10/25/11 07:48	YES
04	TH-234	DO	AR-01-31-110928	pCi/g	4.73E+02	4.79E+01	3.33E+01					09/28/11 00:00	4.23E+02	10/25/11 07:48	NO
04	TL-208	DO	AR-01-31-110928	pCi/g	6.66E+00	3.41E+00	4.84E+00					09/28/11 00:00	4.23E+02	10/25/11 07:48	NO
05	AC-228	TRG	JB-11-31-110928	pCi/g	1.25E+00	4.71E-01	6.42E-01					09/28/11 00:00	5.69E+02	10/25/11 06:55	YES
05	BI-214	TRG	JB-11-31-110928	pCi/g	2.77E+01	1.72E+00	3.11E-01					09/28/11 00:00	5.69E+02	10/25/11 06:55	YES
05	K-40	TRG	JB-11-31-110928	pCi/g	1.90E+01	2.92E+00	1.71E+00					09/28/11 00:00	5.69E+02	10/25/11 06:55	YES
05	PA-234M	TRG	JB-11-31-110928	pCi/g	1.88E+01	1.25E+01	2.26E+01					09/28/11 00:00	5.69E+02	10/25/11 06:55	NO
05	PB-212	TRG	JB-11-31-110928	pCi/g	6.58E-01	1.43E-01	3.24E-01					09/28/11 00:00	5.69E+02	10/25/11 06:55	YES
05	PB-214	TRG	JB-11-31-110928	pCi/g	2.90E+01	2.05E+00	3.59E-01					09/28/11 00:00	5.69E+02	10/25/11 06:55	YES
05	RA-226	TRG	JB-11-31-110928	pCi/g	2.77E+01	1.72E+00	3.11E-01					09/28/11 00:00	5.69E+02	10/25/11 06:55	YES
05	TH-234	TRG	JB-11-31-110928	pCi/g	1.56E+01	4.19E+00	4.37E+00					09/28/11 00:00	5.69E+02	10/25/11 06:55	YES
05	TL-208	TRG	JB-11-31-110928	pCi/g	5.75E-01	1.68E-01	4.82E-01					09/28/11 00:00	5.69E+02	10/25/11 06:55	YES

Preliminary Data Report & Analytical Calculations  
**Work Order: 11-09167-Gamma-1**

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LSC Known	LCS %R	LCS Flag	RPD Flag	Sample Date	Sample Aliquot	Counting Date/Time	Identified
06	AC-228	TRG	JB-30-31-110928	pCi/g	1.02E+00	2.28E-01	2.46E-01					09/28/11 00:00	5.70E+02	10/25/11 07:43	YES
06	BI-214	TRG	JB-30-31-110928	pCi/g	2.89E+00	2.75E-01	1.33E-01					09/28/11 00:00	5.70E+02	10/25/11 07:43	YES
06	K-40	TRG	JB-30-31-110928	pCi/g	1.93E+01	2.29E+00	6.04E-01					09/28/11 00:00	5.70E+02	10/25/11 07:43	YES
06	PA-234M	TRG	JB-30-31-110928	pCi/g	-9.24E-01	4.62E+00	8.12E+00					09/28/11 00:00	5.70E+02	10/25/11 07:43	NO
06	PB-212	TRG	JB-30-31-110928	pCi/g	9.98E-01	1.46E-01	1.23E-01					09/28/11 00:00	5.70E+02	10/25/11 07:43	YES
06	PB-214	TRG	JB-30-31-110928	pCi/g	2.94E+00	2.62E-01	1.47E-01					09/28/11 00:00	5.70E+02	10/25/11 07:43	YES
06	RA-226	TRG	JB-30-31-110928	pCi/g	2.89E+00	2.75E-01	1.33E-01					09/28/11 00:00	5.70E+02	10/25/11 07:43	YES
06	TH-234	TRG	JB-30-31-110928	pCi/g	3.22E+00	1.14E+00	1.55E+00					09/28/11 00:00	5.70E+02	10/25/11 07:43	YES
06	TL-208	TRG	JB-30-31-110928	pCi/g	7.80E-01	1.36E-01	1.79E-01					09/28/11 00:00	5.70E+02	10/25/11 07:43	YES
07	AC-228	TRG	JB-41-31-110928	pCi/g	1.09E+00	2.28E-01	2.88E-01					09/28/11 00:00	5.48E+02	10/25/11 07:44	YES
07	BI-214	TRG	JB-41-31-110928	pCi/g	2.41E+00	2.69E-01	1.45E-01					09/28/11 00:00	5.48E+02	10/25/11 07:44	YES
07	K-40	TRG	JB-41-31-110928	pCi/g	2.11E+01	2.87E+00	6.69E-01					09/28/11 00:00	5.48E+02	10/25/11 07:44	YES
07	PA-234M	TRG	JB-41-31-110928	pCi/g	-1.08E+00	5.39E+00	9.36E+00					09/28/11 00:00	5.48E+02	10/25/11 07:44	NO
07	PB-212	TRG	JB-41-31-110928	pCi/g	1.03E+00	1.50E-01	1.24E-01					09/28/11 00:00	5.48E+02	10/25/11 07:44	YES
07	PB-214	TRG	JB-41-31-110928	pCi/g	2.39E+00	2.48E-01	1.51E-01					09/28/11 00:00	5.48E+02	10/25/11 07:44	YES
07	RA-226	TRG	JB-41-31-110928	pCi/g	2.41E+00	2.69E-01	1.45E-01					09/28/11 00:00	5.48E+02	10/25/11 07:44	YES
07	TH-234	TRG	JB-41-31-110928	pCi/g	2.05E+00	1.36E+00	1.55E+00					09/28/11 00:00	5.48E+02	10/25/11 07:44	YES
07	TL-208	TRG	JB-41-31-110928	pCi/g	8.89E-01	2.45E-01	3.86E-01					09/28/11 00:00	5.48E+02	10/25/11 07:44	NO
08	AC-228	TRG	JB-41-32-110928	pCi/g	1.13E+00	2.53E-01	2.57E-01					09/28/11 00:00	5.70E+02	10/25/11 07:58	YES
08	BI-214	TRG	JB-41-32-110928	pCi/g	2.32E+00	2.92E-01	1.50E-01					09/28/11 00:00	5.70E+02	10/25/11 07:58	YES
08	K-40	TRG	JB-41-32-110928	pCi/g	1.92E+01	2.49E+00	6.33E-01					09/28/11 00:00	5.70E+02	10/25/11 07:58	YES
08	PA-234M	TRG	JB-41-32-110928	pCi/g	1.17E+00	5.23E+00	9.65E+00					09/28/11 00:00	5.70E+02	10/25/11 07:58	NO
08	PB-212	TRG	JB-41-32-110928	pCi/g	1.11E+00	1.57E-01	1.22E-01					09/28/11 00:00	5.70E+02	10/25/11 07:58	YES
08	PB-214	TRG	JB-41-32-110928	pCi/g	2.54E+00	2.59E-01	1.53E-01					09/28/11 00:00	5.70E+02	10/25/11 07:58	YES
08	RA-226	TRG	JB-41-32-110928	pCi/g	2.32E+00	2.92E-01	1.50E-01					09/28/11 00:00	5.70E+02	10/25/11 07:58	YES
08	TH-234	TRG	JB-41-32-110928	pCi/g	2.48E+00	2.06E+00	1.67E+00					09/28/11 00:00	5.70E+02	10/25/11 07:58	YES
08	TL-208	TRG	JB-41-32-110928	pCi/g	7.22E-01	1.67E-01	2.21E-01					09/28/11 00:00	5.70E+02	10/25/11 07:58	YES
09	AC-228	TRG	JB-48-31-110928	pCi/g	1.01E+00	2.17E-01	3.15E-01					09/28/11 00:00	5.52E+02	10/25/11 08:49	YES
09	BI-214	TRG	JB-48-31-110928	pCi/g	3.86E+00	3.40E-01	1.41E-01					09/28/11 00:00	5.52E+02	10/25/11 08:49	YES
09	K-40	TRG	JB-48-31-110928	pCi/g	2.22E+01	2.67E+00	6.64E-01					09/28/11 00:00	5.52E+02	10/25/11 08:49	YES
09	PA-234M	TRG	JB-48-31-110928	pCi/g	2.68E+00	5.41E+00	9.91E+00					09/28/11 00:00	5.52E+02	10/25/11 08:49	NO
09	PB-212	TRG	JB-48-31-110928	pCi/g	1.12E+00	1.62E-01	1.21E-01					09/28/11 00:00	5.52E+02	10/25/11 08:49	YES
09	PB-214	TRG	JB-48-31-110928	pCi/g	3.79E+00	3.20E-01	1.63E-01					09/28/11 00:00	5.52E+02	10/25/11 08:49	YES
09	RA-226	TRG	JB-48-31-110928	pCi/g	3.86E+00	3.40E-01	1.41E-01					09/28/11 00:00	5.52E+02	10/25/11 08:49	YES
09	TH-234	TRG	JB-48-31-110928	pCi/g	1.21E+00	1.07E+00	1.85E+00					09/28/11 00:00	5.52E+02	10/25/11 08:49	NO
09	TL-208	TRG	JB-48-31-110928	pCi/g	8.75E-01	1.49E-01	1.99E-01					09/28/11 00:00	5.52E+02	10/25/11 08:49	YES
10	AC-228	TRG	JB-67-31-110928	pCi/g	1.01E+00	2.10E-01	3.26E-01					09/28/11 00:00	5.76E+02	10/25/11 08:50	YES
10	BI-214	TRG	JB-67-31-110928	pCi/g	4.27E+00	3.87E-01	1.51E-01					09/28/11 00:00	5.76E+02	10/25/11 08:50	YES

10/25/11

Preliminary Data Report & Analytical Calculations  
**Work Order: 11-09167-Gamma-1**

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LSC Known	LCS %R	LCS Flag	RPD Flag	Sample Date	Sample Aliquot	Counting Date/Time	Identified
10	K-40	TRG	JB-67-31-110928	pCi/g	1.95E+01	2.62E+00	6.82E-01					09/28/11 00:00	5.76E+02	10/25/11 08:50	YES
10	PA-234M	TRG	JB-67-31-110928	pCi/g	4.34E-01	5.48E+00	9.70E+00					09/28/11 00:00	5.76E+02	10/25/11 08:50	NO
10	PB-212	TRG	JB-67-31-110928	pCi/g	1.67E-01	1.33E-01	1.38E-01					09/28/11 00:00	5.76E+02	10/25/11 08:50	YES
10	PB-214	TRG	JB-67-31-110928	pCi/g	4.42E+00	3.77E-01	1.48E-01					09/28/11 00:00	5.76E+02	10/25/11 08:50	YES
10	RA-226	TRG	JB-67-31-110928	pCi/g	4.27E+00	3.87E-01	1.61E-01					09/28/11 00:00	5.76E+02	10/25/11 08:50	YES
10	TH-234	TRG	JB-67-31-110928	pCi/g	2.51E+00	1.54E+00	1.72E+00					09/28/11 00:00	5.76E+02	10/25/11 08:50	YES
10	TL-208	TRG	JB-67-31-110928	pCi/g	1.08E+00	2.28E-01	3.94E-01					09/28/11 00:00	5.76E+02	10/25/11 08:50	NO
11	AC-228	TRG	JB-68-31-110928	pCi/g	9.11E-01	7.59E-01	1.04E+00					09/28/11 00:00	6.06E+02	10/25/11 08:52	NO
11	BI-214	TRG	JB-68-31-110928	pCi/g	1.31E+01	1.13E+00	4.16E-01					09/28/11 00:00	6.06E+02	10/25/11 08:52	YES
11	K-40	TRG	JB-68-31-110928	pCi/g	2.01E+01	3.40E+00	2.01E+00					09/28/11 00:00	6.06E+02	10/25/11 08:52	YES
11	PA-234M	TRG	JB-68-31-110928	pCi/g	4.91E+00	1.42E+01	2.59E+01					09/28/11 00:00	6.06E+02	10/25/11 08:52	NO
11	PB-212	TRG	JB-68-31-110928	pCi/g	9.66E-01	2.48E-01	3.54E-01					09/28/11 00:00	6.06E+02	10/25/11 08:52	YES
11	PB-214	TRG	JB-68-31-110928	pCi/g	1.28E+01	1.22E+00	4.52E-01					09/28/11 00:00	6.06E+02	10/25/11 08:52	YES
11	RA-226	TRG	JB-68-31-110928	pCi/g	1.31E+01	1.13E+00	4.16E-01					09/28/11 00:00	6.06E+02	10/25/11 08:52	YES
11	TH-234	TRG	JB-68-31-110928	pCi/g	1.04E+01	5.03E+00	4.44E+00					09/28/11 00:00	6.06E+02	10/25/11 08:52	YES
11	TL-208	TRG	JB-68-31-110928	pCi/g	7.28E-01	2.46E-01	6.20E-01					09/28/11 00:00	6.06E+02	10/25/11 08:52	YES
12	AC-228	TRG	JBBKGD-E-31-110928	pCi/g	7.46E-01	1.86E-01	2.74E-01					09/28/11 00:00	6.16E+02	10/25/11 09:02	YES
12	BI-214	TRG	JBBKGD-E-31-110928	pCi/g	1.32E+00	1.78E-01	1.11E-01					09/28/11 00:00	6.16E+02	10/25/11 09:02	YES
12	K-40	TRG	JBBKGD-E-31-110928	pCi/g	1.49E+01	2.10E+00	4.94E-01					09/28/11 00:00	6.16E+02	10/25/11 09:02	YES
12	PA-234M	TRG	JBBKGD-E-31-110928	pCi/g	-1.30E+00	5.14E+00	9.00E+00					09/28/11 00:00	6.16E+02	10/25/11 09:02	NO
12	PB-212	TRG	JBBKGD-E-31-110928	pCi/g	8.83E-01	1.30E-01	9.77E-02					09/28/11 00:00	6.16E+02	10/25/11 09:02	YES
12	PB-214	TRG	JBBKGD-E-31-110928	pCi/g	1.38E+00	1.70E-01	1.13E-01					09/28/11 00:00	6.16E+02	10/25/11 09:02	YES
12	RA-226	TRG	JBBKGD-E-31-110928	pCi/g	1.32E+00	1.78E-01	1.11E-01					09/28/11 00:00	6.16E+02	10/25/11 09:02	YES
12	TH-234	TRG	JBBKGD-E-31-110928	pCi/g	4.67E-01	8.74E-01	1.55E+00					09/28/11 00:00	6.16E+02	10/25/11 09:02	NO
12	TL-208	TRG	JBBKGD-E-31-110928	pCi/g	6.55E-01	1.37E-01	1.87E-01					09/28/11 00:00	6.16E+02	10/25/11 09:02	YES
13	AC-228	TRG	JBBKGD-S-31-110928	pCi/g	1.06E+00	2.34E-01	2.45E-01					09/28/11 00:00	5.44E+02	10/25/11 09:55	YES
13	BI-214	TRG	JBBKGD-S-31-110928	pCi/g	2.02E+00	2.25E-01	1.40E-01					09/28/11 00:00	5.44E+02	10/25/11 09:55	YES
13	K-40	TRG	JBBKGD-S-31-110928	pCi/g	2.24E+01	2.59E+00	5.89E-01					09/28/11 00:00	5.44E+02	10/25/11 09:55	YES
13	PA-234M	TRG	JBBKGD-S-31-110928	pCi/g	-1.89E+00	4.53E+00	7.84E+00					09/28/11 00:00	5.44E+02	10/25/11 09:55	NO
13	PB-212	TRG	JBBKGD-S-31-110928	pCi/g	1.07E+00	1.44E-01	1.14E-01					09/28/11 00:00	5.44E+02	10/25/11 09:55	YES
13	PB-214	TRG	JBBKGD-S-31-110928	pCi/g	2.08E+00	2.09E-01	1.37E-01					09/28/11 00:00	5.44E+02	10/25/11 09:55	YES
13	RA-226	TRG	JBBKGD-S-31-110928	pCi/g	2.02E+00	2.25E-01	1.40E-01					09/28/11 00:00	5.44E+02	10/25/11 09:55	YES
13	TH-234	TRG	JBBKGD-S-31-110928	pCi/g	8.08E-01	9.39E-01	1.64E+00					09/28/11 00:00	5.44E+02	10/25/11 09:55	NO
13	TL-208	TRG	JBBKGD-S-31-110928	pCi/g	9.64E-01	1.55E-01	1.88E-01					09/28/11 00:00	5.44E+02	10/25/11 09:55	YES
14	AC-228	TRG	JBBKGD-W-31-110928	pCi/g	8.29E-01	2.80E-01	4.43E-01					09/28/11 00:00	5.81E+02	10/25/11 09:56	NO
14	BI-214	TRG	JBBKGD-W-31-110928	pCi/g	1.74E+00	2.10E-01	1.21E-01					09/28/11 00:00	5.81E+02	10/25/11 09:56	YES
14	K-40	TRG	JBBKGD-W-31-110928	pCi/g	1.79E+01	2.50E+00	6.31E-01					09/28/11 00:00	5.81E+02	10/25/11 09:56	YES
14	PA-234M	TRG	JBBKGD-W-31-110928	pCi/g	6.20E-01	4.91E+00	8.81E+00					09/28/11 00:00	5.81E+02	10/25/11 09:56	NO

Preliminary Data Report & Analytical Calculations  
**Work Order: 11-09167-Gamma-1**

Lab Fraction	Nuclide	Sample Desc	Client Identification	Activity Units	Results	Error Estimate	MDA	LSC Known	LCS %R	LCS Flag	RPD Flag	Sample Date	Sample Aliquot	Counting Date/Time	Identified
14	PB-212	TRG	JBBKGD-W-31-110928	pCi/g	8.24E-01	1.33E-01	1.09E-01					09/28/11 00:00	5.81E+02	10/25/11 09:56	YES
14	PB-214	TRG	JBBKGD-W-31-110928	pCi/g	1.74E+00	1.81E-01	1.26E-01					09/28/11 00:00	5.81E+02	10/25/11 09:56	YES
14	RA-226	TRG	JBBKGD-W-31-110928	pCi/g	1.74E+00	2.10E-01	1.21E-01					09/28/11 00:00	5.81E+02	10/25/11 09:56	YES
14	TH-234	TRG	JBBKGD-W-31-110928	pCi/g	1.13E+00	8.69E-01	1.52E+00					09/28/11 00:00	5.81E+02	10/25/11 09:56	NO
14	TL-208	TRG	JBBKGD-W-31-110928	pCi/g	8.42E-01	2.37E-01	3.49E-01					09/28/11 00:00	5.81E+02	10/25/11 09:56	NO
15	AC-228	TRG	VTP-01-31-110928	pCi/g	3.37E+00	2.94E+00	3.60E+00					09/28/11 00:00	4.34E+02	10/25/11 09:57	NO
15	BI-214	TRG	VTP-01-31-110928	pCi/g	2.07E+02	1.21E+01	1.57E+00					09/28/11 00:00	4.34E+02	10/25/11 09:57	YES
15	K-40	TRG	VTP-01-31-110928	pCi/g	1.80E+01	8.84E+00	9.08E+00					09/28/11 00:00	4.34E+02	10/25/11 09:57	YES
15	PA-234M	TRG	VTP-01-31-110928	pCi/g	-8.12E+00	5.79E+01	9.91E+01					09/28/11 00:00	4.34E+02	10/25/11 09:57	NO
15	PB-212	TRG	VTP-01-31-110928	pCi/g	2.31E+00	1.04E+00	1.43E+00					09/28/11 00:00	4.34E+02	10/25/11 09:57	YES
15	PB-214	TRG	VTP-01-31-110928	pCi/g	2.14E+02	1.75E+01	1.80E+00					09/28/11 00:00	4.34E+02	10/25/11 09:57	YES
15	RA-226	TRG	VTP-01-31-110928	pCi/g	2.07E+02	1.21E+01	1.57E+00					09/28/11 00:00	4.34E+02	10/25/11 09:57	YES
15	TH-234	TRG	VTP-01-31-110928	pCi/g	2.08E+01	1.34E+01	1.83E+01					09/28/11 00:00	4.34E+02	10/25/11 09:57	YES
15	TL-208	TRG	VTP-01-31-110928	pCi/g	4.34E+00	1.77E+00	2.58E+00					09/28/11 00:00	4.34E+02	10/25/11 09:57	NO



2L

Internal Fraction	Sample Desc	Client ID	Sample Date	Sample Aliquot	Tracer Aliquot (g)	Tracer ACT (dpm)	Radiometric Tracer (pCi)	Radiometric % Rec	SAF 1*	SAF 2*
01	LCS	LCS	09/30/11 00:00	1.0000				0.00		
02	MBL	BLANK	09/30/11 00:00	1.0000				0.00		
03	DUP	AR-01-31-110928	09/28/11 00:00	422.9400				0.00		
04	DO	AR-01-31-110928	09/28/11 00:00	422.9400				0.00		
05	TRG	JB-11-31-110928	09/28/11 00:00	568.5100				0.00		
06	TRG	JB-30-31-110928	09/28/11 00:00	569.8700				0.00		
07	TRG	JB-41-31-110928	09/28/11 00:00	548.0300				0.00		
08	TRG	JB-41-32-110928	09/28/11 00:00	569.7500				0.00		
09	TRG	JB-48-31-110928	09/28/11 00:00	551.6900				0.00		
10	TRG	JB-67-31-110928	09/28/11 00:00	576.1300				0.00		
11	TRG	JB-68-31-110928	09/28/11 00:00	605.5400				0.00		
12	TRG	JBBKGD-E-31-110928	09/28/11 00:00	615.8000				0.00		
13	TRG	JBBKGD-S-31-110928	09/28/11 00:00	543.7000				0.00		
14	TRG	JBBKGD-W-31-110928	09/28/11 00:00	580.9800				0.00		
15	TRG	VTP-01-31-110928	09/28/11 00:00	433.9400				0.00		

0039

## Aliquot Worksheet

Work Order	Run	Analysis Code	Rpt Units	Lab Deadline	Technician
<b>11-09167</b>	<b>1</b>	<b>Gamma</b>	<b>grams</b>	<b>10/24/2011</b>	<b>KSALLINGS</b>

[illegible]

Comments	
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Technician:

Kenny Sully

Date:

10,4,11



Sample ID : 1109167-01

Page : 1  
Acquisition date : 25-OCT-2011 10:03:20

VAX/VMS Peak Search Report Generated 25-OCT-2011 10:35:05.10

10/25/11

Configuration : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916701\_GE3\_GAS1102\_169792.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : GAS-1002  
 Deposition Date :  
 Sample Date : 1-JAN-2010 00:00:00. Acquisition date : 25-OCT-2011 10:03:20  
 Sample ID : 1109167-01 Sample Quantity : 7.36000E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE3 Detector Geometry: GAS-1102  
 Elapsed live time: 0 00:30:00.00 Elapsed real time: 0 00:31:08.11 3.6%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
2	21.92	149987	7736	1.29	22.20	19	12	0.5	6.67E+02	
2	24.68*	44318	5085	1.35	24.96	19	12	1.4		
0	32.28	2367	6599	1.79	32.56	30	6	11.6		
1	49.84	4391	7965	1.30	50.12	45	20	7.3	5.99E+03	TH-230
1	53.72	3682	8029	1.19	54.00	45	20	9.0		
1	59.84	75294	8286	1.32	60.12	45	20	0.9		AM-241
0	67.89	1211	16414	3.46	68.18	66	7	35.5		TH-230
0	87.92	50968	16147	1.32	88.20	84	8	1.2		NP-237
										SN-126
										CD-109
0	122.01	12810	9225	1.44	122.29	117	9	3.2		CO-57
0	136.28	1436	6945	1.34	136.56	133	8	20.8		CO-57
0	165.76	2879	5373	1.22	166.05	163	7	9.2		CE-139
0	239.11*	283	4220	1.51	239.41	237	6	73.6		PB-212
0	352.33*	160	2288	1.53	352.63	351	5	91.4		
0	391.79	1060	3216	1.31	392.09	389	7	18.8		SN-113
0	511.48*	138	1953	2.74	511.79	509	6	103.7		
0	661.69	24242	2861	1.51	662.01	657	10	1.5		CS-137
0	782.76	100	1312	2.56	783.08	781	6	116.0		
0	898.25	956	2581	2.00	898.58	895	9	20.2		Y-88
0	1173.32*	22528	1439	2.12	1173.67	1168	12	1.5		CO-60
0	1332.58*	20677	555	2.06	1332.94	1327	12	1.5		CO-60
0	1389.87	37	105	4.15	1390.24	1386	9	105.3		
0	1489.52	21	40	1.37	1489.89	1487	5	101.8		
0	1619.29	30	63	3.03	1619.66	1615	8	100.7		
0	1773.34	22	39	4.72	1773.73	1770	9	108.5		
2	1836.21	561	27	2.36	1836.60	1832	13	9.0	2.08E+00	Y-88
2	1840.44	26	18	2.79	1840.83	1832	13	158.0		
0	1994.13	20	28	2.95	1994.53	1991	7	100.8		
2	2000.10	23	12	2.85	2000.50	1998	11	63.2	1.70E+00	
2	2005.10	16	24	2.86	2005.50	1998	11	114.0		
0	2198.61	10	13	1.25	2199.03	2196	6	133.0		
0	2261.62	25	14	4.48	2262.04	2259	7	63.7		
0	2316.24	20	13	2.65	2316.66	2313	10	80.7		
0	2506.00	197	2	2.53	2506.43	2502	11	14.6		
0	2615.70*	13	0	2.66	2616.13	2612	7	59.1		

AG  
10/25/11

0042

Post-NID Peak Search Report (continued)  
Sample ID : 1109167-01

Page : 2  
Acquisition date : 25-OCT-2011 10:03:20

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	2735.51	8	2	1.99	2735.95	2731	8	94.7		

Total number of lines in spectrum 35  
Number of unidentified lines 15  
Number of lines tentatively identified by NID 20 57.14%

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	5.45	1.237E+01	6.738E+01	0.759E+01	11.26	
Y-88	106.60D	74.2	3.527E+00	2.618E+02	0.299E+02	11.44	
CD-109	464.00D	2.69	1.130E+03	3.041E+03	0.507E+03	16.66	
SN-113	115.10D	54.0	2.874E+00	1.552E+02	0.335E+02	21.60	
SN-126	1.00E+05Y	1.00	1.137E+02	1.137E+02	0.176E+02	15.46	
CS-137	30.17Y	1.04	8.135E+01	8.482E+01	0.877E+01	10.34	
CE-139	137.66D	28.1	3.359E+00	9.435E+01	1.335E+01	14.15	
NP-237	2.14E+06Y	1.00	3.345E+02	3.345E+02	0.508E+02	15.20	
Total Activity :			1.682E+03	4.152E+03			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.27	1.048E+02	1.330E+02	0.096E+02	7.20	
TH-230	7.70E+04Y	1.00	2.912E+01	2.912E+01	0.378E+01	12.97	
Total Activity :			1.339E+02	1.621E+02			

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
PB-212	1.41E+10Y	1.00	7.427E-01	7.427E-01	5.512E-01	74.22	
AM-241	432.20Y	1.00	2.000E+02	2.006E+02	0.184E+02	9.20	
Total Activity :			2.007E+02	2.013E+02			

Grand Total Activity : 2.017E+03 4.516E+03

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr 2-Sigma			Status
				pCi/GRAM	pCi/GRAM	%Error	
CO-57	122.06	85.51*	2.430E+00	1.258E+01	6.850E+01	12.72	OK
	136.48	10.60	2.357E+00	1.173E+01	6.386E+01	24.16	OK
Final Mean for 2 Valid Peaks = 6.738E+01+/- 7.589E+00 ( 11.26%)							
Y-88	898.02	93.40	5.442E-01	3.837E+00	2.849E+02	22.13	OK
	1836.01	99.38*	3.353E-01	3.437E+00	2.551E+02	13.34	OK
Final Mean for 2 Valid Peaks = 2.618E+02+/- 2.995E+01 ( 11.44%)							
CD-109	88.03	3.72*	2.473E+00	1.130E+03	3.041E+03	16.66	OK
Final Mean for 1 Valid Peaks = 3.041E+03+/- 5.067E+02 ( 16.66%)							
SN-113	255.12	1.93	1.660E+00	----- Line Not Found		-----	Absent
	391.69	64.90*	1.160E+00	2.874E+00	1.552E+02	21.60	OK
Final Mean for 1 Valid Peaks = 1.552E+02+/- 3.353E+01 ( 21.60%)							
SN-126	87.57	37.00*	2.471E+00	1.137E+02	1.137E+02	15.46	OK
Final Mean for 1 Valid Peaks = 1.137E+02+/- 1.758E+01 ( 15.46%)							
CS-137	661.65	85.12*	7.142E-01	8.135E+01	8.482E+01	10.34	OK
Final Mean for 1 Valid Peaks = 8.482E+01+/- 8.768E+00 ( 10.34%)							
CE-139	165.85	80.35*	2.177E+00	3.359E+00	9.435E+01	14.15	OK
Final Mean for 1 Valid Peaks = 9.435E+01+/- 1.335E+01 ( 14.15%)							
NP-237	86.50	12.60*	2.467E+00	3.345E+02	3.345E+02	15.20	OK
Final Mean for 1 Valid Peaks = 3.345E+02+/- 5.085E+01 ( 15.20%)							

Nuclide Type: ACTIVATION

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr 2-Sigma			Status
				pCi/GRAM	pCi/GRAM	%Error	
CO-60	1173.22	100.00*	4.397E-01	1.045E+02	1.327E+02	11.02	OK
	1332.49	100.00	4.019E-01	1.050E+02	1.332E+02	9.50	OK
Final Mean for 2 Valid Peaks = 1.330E+02+/- 9.570E+00 ( 7.20%)							
TH-230	48.44	16.90	1.820E+00	2.912E+01	2.912E+01	12.97	OK
	62.85	4.60	2.209E+00	----- Line Not Found		-----	Absent
	67.67	0.37*	2.293E+00	2.912E+02	2.912E+02	37.12	<<WM N-Sigma
Final Mean for 1 Valid Peaks = 2.912E+01+/- 3.776E+00 ( 12.97%)							

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay pCi/GRAM	Corr 2-Sigma %Error	Status
PB-212	238.63	44.60*	1.744E+00	7.427E-01	7.427E-01	74.22	OK
	300.09	3.41	1.461E+00	-----	Line Not Found	-----	Absent

Final Mean for 1 Valid Peaks = 7.427E-01+/- 5.512E-01 ( 74.22%)

AM-241	59.54	35.90*	2.139E+00	2.000E+02	2.006E+02	9.20	OK
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Final Mean for 1 Valid Peaks = 2.006E+02+/- 1.845E+01 ( 9.20%)

Flag: "\*" = Keyline



---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	6.738E+01	7.589E+00	1.599E+00	1.861E-01	42.141
CO-60	1.330E+02	9.570E+00	7.520E-01	7.643E-02	176.851
Y-88	2.618E+02	2.995E+01	1.425E+01	1.275E+00	18.370
CD-109	3.041E+03	5.067E+02	2.377E+01	3.835E+00	127.898
SN-113	1.552E+02	3.353E+01	3.218E+01	3.195E+00	4.824
SN-126	1.137E+02	1.758E+01	8.889E-01	1.323E-01	127.937
CS-137	8.482E+01	8.768E+00	6.115E-01	5.754E-02	138.704
CE-139	9.435E+01	1.335E+01	8.560E+00	8.519E-01	11.021
PB-212	7.427E-01	5.512E-01	6.758E-01	6.120E-02	1.099
TH-230	2.912E+01	3.776E+00	1.027E+02	1.038E+01	0.283
NP-237	3.345E+02	5.085E+01	2.613E+00	3.818E-01	128.028
AM-241	2.006E+02	1.845E+01	1.048E+00	8.634E-02	191.326

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	-3.704E-02		3.327E-01	5.603E-01	5.135E-02	-0.066
AL-26	-1.457E-02		1.274E-01	2.161E-01	1.934E-02	-0.067
K-40	3.994E-01		1.368E+00	2.408E+00	2.159E-01	0.166
TI-44	1.163E+00	+	4.318E-01	4.371E-01	4.439E-02	2.660
SC-46	2.063E+01		1.044E+02	1.690E+02	1.370E+01	0.122
MN-54	2.642E-01		1.615E+00	2.750E+00	2.369E-01	0.096
ZN-65	1.117E+00		5.864E+00	9.826E+00	9.579E-01	0.114
SE-75	1.543E+00		1.461E+01	2.373E+01	2.033E+00	0.065
RB-83	7.689E+01		1.109E+02	1.938E+02	3.196E+01	0.397
KR-85	3.069E+01		7.071E+01	1.120E+02	1.122E+01	0.274
NB-93M	-1.500E+02		1.143E+02	4.217E+01	3.119E+01	-3.556
NB-94	-9.331E-02		3.984E-01	6.718E-01	5.567E-02	-0.139
RU-106	4.486E-01		9.675E+00	1.672E+01	2.359E+00	0.027
AG-108M	-2.959E-01		3.342E-01	5.614E-01	5.199E-02	-0.527
AG-110M	2.375E+01		3.547E+00	4.648E+00	4.382E-01	5.110
TE123M	5.831E+00		8.800E+00	1.358E+01	1.387E+00	0.430
SB-125	1.040E+00		1.418E+00	2.269E+00	2.259E-01	0.459
I-129	2.916E+00		9.281E-01	1.133E+00	2.107E-01	2.574
BA-133	3.366E-01		4.467E-01	6.653E-01	8.992E-02	0.506
CS-134	-3.707E-01		5.088E-01	8.664E-01	8.515E-02	-0.428
CS-135	-1.458E+00		1.187E+00	1.877E+00	1.577E-01	-0.777
LA-138	-8.931E-02		2.155E-01	3.578E-01	3.109E-02	-0.250
CE-144	4.444E+00		7.354E+00	1.140E+01	1.272E+00	0.390
PM-144	5.932E-01		1.033E+00	1.787E+00	2.413E-01	0.332
PM-145	1.512E+00		1.779E+00	2.383E+00	1.572E+00	0.635
PM-146	1.782E-01		8.898E-01	1.410E+00	1.392E-01	0.126
EU-152	-9.413E-01		1.032E+00	1.637E+00	1.789E-01	-0.575
GD-153	1.370E+00		4.450E+00	7.479E+00	9.966E-01	0.183
EU-154	-6.122E-02		6.670E-01	1.124E+00	1.031E-01	-0.054
EU-155	1.757E+02	+	2.672E+01	3.515E+00	5.136E-01	50.001
HO-166M	1.334E-01		5.458E-01	9.406E-01	8.745E-02	0.142

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HF-172	7.796E-01		2.685E+00	4.162E+00	4.768E-01	0.187
LU-173	2.223E+00		2.250E+00	3.683E+00	3.058E-01	0.604
LU-176	-1.880E-01		2.177E-01	3.450E-01	2.926E-02	-0.545
TA-182	2.792E+01		6.598E+01	1.112E+02	1.087E+01	0.251
BI-207	-1.141E-01		2.696E-01	4.639E-01	4.617E-02	-0.246
TL-208	-3.210E-02		8.606E-01	1.490E+00	1.476E-01	-0.022
BI-210M	1.647E-02		4.216E-01	6.844E-01	5.857E-02	0.024
PB-210	7.937E+01		1.181E+01	1.391E+01	1.401E+00	5.705
PB-211	2.022E+00		8.661E+00	1.382E+01	1.323E+00	0.146
BI-212	3.851E-01		2.520E+00	4.332E+00	4.005E-01	0.089
BI-214	-3.280E-02		5.867E-01	1.014E+00	9.920E-02	-0.032
PB-214	6.882E-01	+	6.325E-01	9.673E-01	8.747E-02	0.712
RN-219	2.070E+00		3.842E+00	6.157E+00	5.877E-01	0.336
RA-223	-1.864E+00		5.342E+00	8.537E+00	7.431E-01	-0.218
RA-224	7.687E+00		5.195E+00	7.912E+00	7.130E-01	0.972
RA-226	6.730E+00		1.328E+01	8.261E+00	1.513E+01	0.815
TH-227	1.797E-01		1.765E+00	2.659E+00	2.421E-01	0.068
AC-228	6.484E-01		1.601E+00	2.717E+00	2.207E-01	0.239
PA-231	4.187E+00		8.790E+00	1.427E+01	1.202E+00	0.294
TH-231	8.642E+02	+	2.171E+02	2.063E+01	5.106E+00	41.898
PA-234	2.530E-01		7.573E-01	1.173E+00	1.319E-01	0.216
PA-234M	-4.007E+01		4.781E+01	7.884E+01	6.977E+00	-0.508
TH-234	-9.932E+00		7.344E+00	9.999E+00	9.100E-01	-0.993
U-235	-1.003E+00		1.495E+00	2.257E+00	4.212E-01	-0.444
AM-243	-2.241E-01		3.647E-01	5.670E-01	6.654E-02	-0.395
CM-243	-4.789E-01		1.416E+00	2.281E+00	1.859E-01	-0.210

Total number of lines in spectrum 35  
Number of unidentified lines 15  
Number of lines tentatively identified by NID 20 57.14%

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	5.45	1.237E+01	6.738E+01	0.759E+01	11.26	
Y-88	106.60D	74.2	3.527E+00	2.618E+02	0.299E+02	11.44	
CD-109	464.00D	2.69	1.130E+03	3.041E+03	0.507E+03	16.66	
SN-113	115.10D	54.0	2.874E+00	1.552E+02	0.335E+02	21.60	
SN-126	1.00E+05Y	1.00	1.137E+02	1.137E+02	0.176E+02	15.46	
CS-137	30.17Y	1.04	8.135E+01	8.482E+01	0.877E+01	10.34	
CE-139	137.66D	28.1	3.359E+00	9.435E+01	1.335E+01	14.15	
NP-237	2.14E+06Y	1.00	3.345E+02	3.345E+02	0.508E+02	15.20	
Total Activity :			1.682E+03	4.152E+03			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.27	1.048E+02	1.330E+02	0.096E+02	7.20	
TH-230	7.70E+04Y	1.00	2.912E+01	2.912E+01	0.378E+01	12.97	
Total Activity :			1.339E+02	1.621E+02			

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
PB-212	1.41E+10Y	1.00	7.427E-01	7.427E-01	5.512E-01	74.22	
AM-241	432.20Y	1.00	2.000E+02	2.006E+02	0.184E+02	9.20	
Total Activity :			2.007E+02	2.013E+02			

Grand Total Activity : 2.017E+03 4.516E+03

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916701\_GE3\_GAS1102\_169792.CNF;1

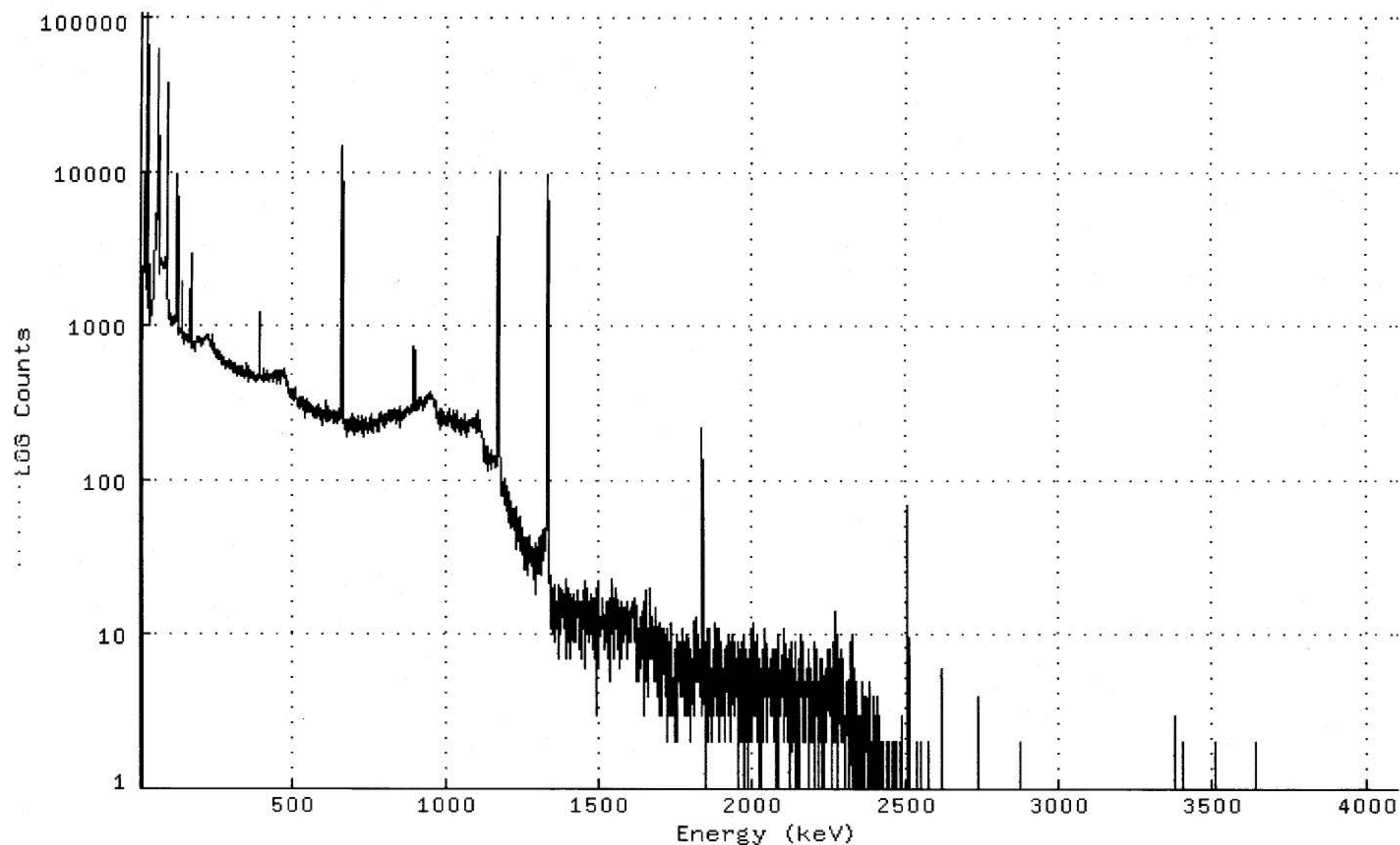
Title :

Sample Title: GAS-1002

Start Time: 25-OCT-2011 10:03 Sample Time: 1-JAN-2010 00:00: Energy Offset:  $-2.78447\text{E-}01$

Real Time : 0 00:31:08.11 Sample ID : 1109167-01 Energy Slope :  $9.99940\text{E-}01$

Live Time : 0 00:30:00.00 Sample Type: SOLID Energy Quad :  $0.00000\text{E+}00$



## Channel Contents for DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916701\_GE3\_GAS1102\_1697

## Channel

1:	0	0	0	0	0	0	0	0
9:	253	1635	3475	9491	4765	2576	3485	2298
17:	2004	3081	1689	3032	11096	105562	39115	7320
25:	35555	11652	2271	1305	1157	978	1158	2426
33:	1950	1390	1064	1183	1328	1411	1226	1216
41:	1305	1552	1844	1919	2034	2373	2643	3367
49:	4420	5260	4749	4717	4751	4932	4843	5465
57:	5553	6156	28230	60626	4513	2162	2211	2101
65:	2121	2386	2601	2668	2584	2526	2434	2426
73:	2399	2331	2432	2292	2467	2469	2325	2302
81:	2402	2466	2600	2693	2759	2776	4307	36738
89:	14753	1637	1452	1388	1257	1150	1115	1093
97:	1112	1021	1153	1072	1066	1102	1100	1082
105:	1055	1076	1070	1111	998	1127	1030	1112
113:	1073	1110	1122	1136	1060	1080	1054	1107
121:	1440	9458	4911	1015	910	981	909	860
129:	877	893	899	910	888	940	864	1274
137:	1884	906	814	811	878	852	878	793
145:	755	841	822	840	848	805	832	792
153:	813	781	776	777	792	853	775	804
161:	775	769	786	782	1019	2904	1269	754
169:	738	782	700	728	704	756	754	726
177:	703	763	742	749	768	659	753	734
185:	792	838	840	756	801	798	780	826
193:	769	827	825	788	807	755	772	795
201:	734	792	809	764	798	745	787	740
209:	774	823	795	808	808	792	839	831
217:	834	816	858	816	838	810	842	791
225:	833	850	810	766	778	725	795	740
233:	739	767	751	693	710	745	846	757
241:	729	730	679	655	694	704	678	679
249:	687	609	671	648	686	606	651	598
257:	675	614	626	609	663	613	600	611
265:	631	606	569	558	577	540	627	576
273:	613	590	563	565	553	548	524	583
281:	544	554	564	580	529	532	539	558
289:	531	554	563	528	518	526	600	575
297:	540	523	566	546	586	518	551	555
305:	515	522	485	552	520	515	565	483
313:	542	540	521	534	511	493	461	464
321:	484	474	473	520	479	494	532	519
329:	527	496	461	518	485	527	497	482
337:	517	456	503	446	453	484	504	459
345:	489	468	484	458	465	464	475	555
353:	504	449	477	423	479	493	479	460
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593:	248	286	257	224	246	264	278	267
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649:	238	258	258	277	243	267	241	288
657:	251	251	263	473	5278	14459	4854	556
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2057:	3	7	4	6	5	6	3	6
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2073:	2	6	8	0	6	3	4	8
2081:	6	6	1	10	7	5	3	5
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2321:	2	0	3	2	3	4	10	3
2329:	6	3	4	1	6	3	2	3
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2369:	2	2	3	2	1	2	3	1
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2385:	1	1	1	0	1	2	1	3
2393:	2	4	1	0	2	3	3	0
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2409:	3	0	2	0	2	0	1	0
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2425:	1	1	0	0	0	1	0	1
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2465:	1	2	1	0	0	0	1	0
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3473:	0	0	0	0	0	0	0	0
3481:	0	0	0	0	0	0	0	0
3489:	0	0	0	0	0	0	0	0
3497:	0	0	0	0	0	0	0	0
3505:	2	0	0	0	0	0	0	0
3513:	0	0	0	0	0	0	0	0
3521:	0	0	1	0	0	0	0	0
3529:	0	0	0	0	0	0	0	0
3537:	0	0	0	0	0	0	0	0
3545:	0	0	0	0	0	0	0	0
3553:	0	0	0	0	0	0	0	0
3561:	0	0	0	0	0	0	0	0
3569:	0	0	0	0	0	0	0	0
3577:	0	0	0	0	0	0	0	0
3585:	1	0	0	0	0	0	0	0
3593:	0	1	0	0	0	0	0	0
3601:	0	1	0	0	0	0	0	0
3609:	0	0	0	0	0	0	0	0
3617:	0	0	0	0	0	0	0	0
3625:	0	0	0	0	0	0	0	0
3633:	0	0	1	0	2	0	0	0
3641:	0	0	0	0	0	0	1	0
3649:	0	0	0	0	0	0	0	0
3657:	0	0	0	0	0	0	0	0
3665:	0	0	0	0	0	1	0	0
3673:	0	0	0	0	0	0	0	0
3681:	0	0	0	0	1	0	0	0
3689:	0	0	0	0	0	0	0	0
3697:	0	0	0	0	0	0	0	0
3705:	0	0	0	0	0	0	0	0
3713:	0	0	0	0	0	0	0	0
3721:	0	0	0	0	0	0	0	0
3729:	0	0	1	0	0	0	0	0
3737:	0	0	0	0	0	0	0	0
3745:	0	0	0	0	0	0	0	0
3753:	0	0	0	1	0	0	0	0
3761:	0	1	0	0	0	0	0	0
3769:	0	0	0	0	0	0	0	1
3777:	0	0	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	0

3793:	1	0	0	1	0	0	0	0
3801:	0	0	0	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0
3817:	0	0	0	0	1	0	0	0
3825:	0	0	0	0	0	0	0	0
3833:	0	0	0	0	0	0	0	1
3841:	0	0	0	0	0	1	0	0
3849:	0	1	0	0	0	0	1	0
3857:	0	0	0	0	0	0	0	0
3865:	0	0	0	0	0	1	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	0	0	0	0	0	0	0	0
3905:	0	0	0	0	0	0	0	0
3913:	0	0	0	0	0	0	0	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	0	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	0	0	0	0	1	1	0
3985:	0	0	0	1	0	0	0	0
3993:	0	1	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	0	0
4017:	0	0	0	1	0	0	0	0
4025:	0	0	0	0	0	0	0	0
4033:	0	0	1	0	0	0	0	0
4041:	0	0	0	0	0	0	0	0
4049:	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	0	1	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0

Sample ID : 1109167-02

Page : 1  
Acquisition date : 25-OCT-2011 10:37:58

VAX/VMS Peak Search Report Generated 25-OCT-2011 11:38:41.83

✓  
10/25/11

Configuration : DKA100: [GAMMA.SCUSR.ARCHIVE] SMP\_110916702\_GE3\_GAS1102\_169794.  
Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
Client ID : BLANK  
Deposition Date :  
Sample Date : 25-OCT-2011 00:00:00 Acquisition date : 25-OCT-2011 10:37:58  
Sample ID : 1109167-02 Sample Quantity : 7.83400E+02 GRAM  
Sample type : SOLID Sample Geometry : 0  
Detector name : GE3 Detector Geometry: GAS-1102  
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:25.07 0.7%  
Start channel : 5 End channel : 4096  
Sensitivity : 2.40000 Gaussian : 15.00000  
Critical level : Yes

Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw %Err	Fit	Nuclides
0	25.61	40	146	4.66	25.89	21	8111.3		TH-231
0	85.27	27	85	3.30	85.55	83	7121.3		TH-231 NP-237
0	168.61	28	42	1.99	168.90	166	8 87.1		
0	177.72	19	36	2.02	178.01	175	6111.6		
0	257.79	25	53	6.09	258.09	253	11123.4		
0	287.87	12	13	1.80	288.16	286	5114.4		
0	361.25	12	17	1.12	361.55	359	5112.7		
0	521.43	21	7	7.75	521.74	517	10 65.7		
0	559.05*	19	6	3.92	559.36	556	8 69.5		
0	626.85	23	14	10.61	627.17	620	15 82.6		
0	640.68*	7	0	2.74	641.00	639	6101.9		
0	648.74	16	3	2.65	649.06	645	10 62.5		
0	774.16	11	9	4.50	774.48	770	10118.2		
0	782.92	10	4	3.92	783.25	779	8 93.8		
0	873.29	8	5	0.96	873.62	869	8124.4		
0	1040.41	8	0	1.47	1040.75	1037	7 70.7		
0	1120.54	7	6	1.30	1120.89	1118	7126.9		
0	1129.94	7	0	2.09	1130.29	1128	5 75.6		
0	1141.40	8	0	2.22	1141.75	1139	7 70.7		
0	1150.21	9	0	1.66	1150.56	1147	7 66.7		
0	1317.56	12	0	3.37	1317.92	1314	8 57.7		
0	1734.90	7	0	1.33	1735.29	1732	7 75.6		

AG  
10/25/11

Summary of Nuclide Activity  
Sample ID : 1109167-02

Page : 2  
Acquisition date : 25-OCT-2011 10:37:58

Total number of lines in spectrum 22  
Number of unidentified lines 15  
Number of lines tentatively identified by NID 7 31.82%

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-231	7.04E+08Y	1.00	3.701E-01	3.701E-01	4.224E-01	114.14	
NP-237	2.14E+06Y	1.00	8.178E-02	8.178E-02	1.000E-01	122.28	
Total Activity :			4.519E-01	4.519E-01			

Grand Total Activity : 4.519E-01 4.519E-01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay pCi/GRAM	Corr 2-Sigma %Error	Status
TH-231	25.64	14.70*	7.117E-01	3.701E-01	3.701E-01	114.14	OK
	84.21	6.40	2.456E+00	1.617E-01	1.617E-01	122.21	<<WM Interf

Final Mean for 1 Valid Peaks = 3.701E-01+/- 4.224E-01 (114.14%)

NP-237	86.50	12.60*	2.467E+00	8.178E-02	8.178E-02	122.28	OK
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Final Mean for 1 Valid Peaks = 8.178E-02+/- 1.000E-01 (122.28%)

Flag: "\*" = Keyline



---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-231	3.701E-01	4.224E-01	3.864E-01	9.567E-02	0.958
NP-237	8.178E-02	1.000E-01	1.177E-01	1.719E-02	0.695

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.084E-02		1.197E-01	2.056E-01	2.045E-02	-0.101
NA-22	-1.578E-03		1.457E-02	2.914E-02	2.670E-03	-0.054
NA-24	-1.107E-02		2.324E-02	4.125E-02	3.534E-03	-0.268
AL-26	1.102E-02		1.125E-02	3.375E-02	3.019E-03	0.326
K-40	-1.917E-02		1.837E-01	3.954E-01	3.546E-02	-0.048
AR-41	-5.079E-01		7.426E-01	1.179E+00	1.055E-01	-0.431
TI-44	-1.193E-02		9.828E-03	1.582E-02	1.607E-03	-0.754
SC-46	1.879E-04		1.351E-02	2.734E-02	2.216E-03	0.007
V-48	6.273E-03		1.670E-02	3.515E-02	3.062E-03	0.178
CR-51	-7.191E-02		1.066E-01	1.700E-01	1.549E-02	-0.423
MN-54	-6.291E-03		1.326E-02	2.404E-02	2.070E-03	-0.262
CO-56	1.621E-03		1.322E-02	2.728E-02	2.321E-03	0.059
CO-57	4.147E-03		8.005E-03	1.521E-02	1.767E-03	0.273
CO-58	6.415E-03		1.521E-02	3.193E-02	2.814E-03	0.201
FE-59	1.086E-02		2.859E-02	6.142E-02	6.292E-03	0.177
CO-60	5.007E-05		1.280E-02	2.642E-02	2.685E-03	0.002
ZN-65	-9.391E-03		2.963E-02	4.849E-02	4.725E-03	-0.194
GA-67	-2.615E-02		4.404E-02	6.104E-02	6.905E-02	-0.428
SE-75	-1.149E-03		1.681E-02	2.728E-02	2.333E-03	-0.042
RB-82	5.188E-02		8.669E-02	2.023E-01	1.824E-02	0.256
RB-83	4.877E-02	+	3.308E-02	4.878E-02	8.023E-03	1.000
KR-85	1.105E+00		4.912E+00	8.454E+00	8.467E-01	0.131
SR-85	4.855E-03		2.158E-02	3.714E-02	3.720E-03	0.131
Y-88	4.901E-03		1.488E-02	3.464E-02	3.097E-03	0.141
NB-93M	-1.208E+00		1.518E+00	2.111E+00	1.561E+00	-0.572
NB-94	1.139E-02		1.286E-02	3.038E-02	2.518E-03	0.375
NB-95	3.504E-03		1.445E-02	2.752E-02	2.497E-03	0.127
NB-95M	-2.031E-02		4.474E-02	7.463E-02	6.799E-03	-0.272
ZR-95	-2.013E-03		2.129E-02	4.246E-02	4.225E-03	-0.047
MO-99	-6.279E-02		9.219E-02	1.602E-01	1.473E-02	-0.392
RU-103	-2.387E-03		1.119E-02	1.953E-02	2.937E-03	-0.122
RU-106	-1.182E-02		1.210E-01	2.370E-01	3.338E-02	-0.050
AG-108M	4.389E-03		1.433E-02	2.997E-02	2.775E-03	0.146
CD-109	-8.033E-02		2.536E-01	4.074E-01	6.570E-02	-0.197
AG-110M	7.635E-03		1.096E-02	2.422E-02	2.283E-03	0.315
SN-113	1.295E-02		1.695E-02	3.346E-02	3.249E-03	0.387
TE123M	-3.252E-03		9.538E-03	1.641E-02	1.674E-03	-0.198
SB-124	4.972E-03		1.619E-02	3.211E-02	3.152E-03	0.155
I-125	8.537E-03		2.056E-01	3.841E-01	5.384E-02	0.022
SB-125	2.881E-02		3.540E-02	7.222E-02	7.129E-03	0.399
SB-126	1.642E-02		2.456E-02	5.412E-02	5.017E-03	0.303

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-126	-7.588E-03		2.551E-02	4.110E-02	6.117E-03	-0.185
SB-127	-1.202E-02		3.680E-02	6.935E-02	6.492E-03	-0.173
I-129	1.293E-02		3.313E-02	5.989E-02	1.114E-02	0.216
I-131	-4.698E-03		1.419E-02	2.177E-02	1.999E-03	-0.216
TE-132	-2.554E-03		1.002E-02	1.739E-02	1.606E-03	-0.147
BA-133	-2.761E-02		2.468E-02	3.171E-02	4.285E-03	-0.871
I-133	6.452E-03		2.075E-02	3.919E-02	3.926E-03	0.165
CS-134	-2.066E-02		1.855E-02	3.030E-02	2.977E-03	-0.682
CS-135	3.985E-02		5.902E-02	1.132E-01	9.508E-03	0.352
I-135	1.448E-01		1.624E-01	4.023E-01	3.748E-02	0.360
CS-136	-9.027E-04		2.184E-02	3.875E-02	3.657E-03	-0.023
CS-137	-9.740E-03		1.173E-02	1.966E-02	1.850E-03	-0.495
LA-138	1.971E-03		2.587E-02	5.304E-02	4.609E-03	0.037
CE-139	-2.768E-04		1.076E-02	1.771E-02	1.759E-03	-0.016
BA-140	1.778E-02		4.634E-02	9.591E-02	3.216E-02	0.185
LA-140	-3.020E-03		2.233E-02	4.214E-02	3.743E-03	-0.072
CE-141	-5.820E-04		1.702E-02	2.941E-02	5.794E-03	-0.020
CE-143	2.268E-02		3.013E-02	5.552E-02	4.608E-03	0.409
CE-144	-1.096E-02		6.527E-02	1.156E-01	1.290E-02	-0.095
PM-144	8.891E-03		1.551E-02	3.235E-02	3.021E-03	0.275
PM-145	-2.526E-03		5.820E-02	1.077E-01	7.097E-02	-0.023
PM-146	-1.312E-02		3.015E-02	4.932E-02	4.863E-03	-0.266
ND-147	2.331E-02		9.270E-02	1.823E-01	1.826E-02	0.128
PM-149	8.451E-02		3.840E-01	6.520E-01	5.346E-02	0.130
EU-152	-1.876E-02		5.994E-02	1.218E-01	1.331E-02	-0.154
GD-153	3.466E-03		3.368E-02	6.124E-02	8.160E-03	0.057
EU-154	-5.027E-03		4.083E-02	8.137E-02	7.457E-03	-0.062
EU-155	3.335E-02	+	4.078E-02	5.162E-02	7.543E-03	0.646
EU-156	3.977E-02		1.368E-01	2.856E-01	6.541E-02	0.139
HO-166M	8.294E-03		2.840E-02	5.740E-02	5.336E-03	0.145
HF-172	-8.150E-03		6.646E-02	1.179E-01	1.350E-02	-0.069
LU-172	-1.551E-02		3.063E-02	5.358E-02	5.128E-03	-0.290
LU-173	-6.435E-03		4.461E-02	7.773E-02	6.453E-03	-0.083
HF-175	-3.900E-03		1.248E-02	2.111E-02	1.888E-03	-0.185
LU-176	2.573E-03		1.023E-02	1.886E-02	1.599E-03	0.136
TA-182	4.494E-02	+	5.723E-02	1.175E-01	1.149E-02	0.383
IR-192	-4.556E-03		2.246E-02	3.887E-02	3.855E-03	-0.117
HG-203	1.276E-03		1.123E-02	2.048E-02	1.713E-03	0.062
BI-207	-1.028E-03		1.326E-02	2.561E-02	2.548E-03	-0.040
TL-208	2.954E-02		5.366E-02	1.077E-01	1.067E-02	0.274
BI-210M	-5.907E-03		2.156E-02	3.386E-02	2.898E-03	-0.174
PB-210	8.533E-02		3.437E-01	6.609E-01	6.656E-02	0.129
PB-211	1.307E-01		3.880E-01	7.245E-01	6.933E-02	0.180
BI-212	-5.223E-02		1.104E-01	2.007E-01	1.856E-02	-0.260
PB-212	-9.283E-03		2.372E-02	4.442E-02	4.023E-03	-0.209
BI-214	1.283E-03		4.217E-02	8.457E-02	8.270E-03	0.015
PB-214	-2.503E-02		3.890E-02	6.687E-02	6.047E-03	-0.374
RN-219	-3.161E-02		1.882E-01	3.225E-01	3.079E-02	-0.098

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-223	8.312E-02		2.515E-01	4.693E-01	4.084E-02	0.177
RA-224	1.392E-01		2.509E-01	4.678E-01	4.216E-02	0.298
RA-225	-2.644E-02		3.763E-02	6.494E-02	7.746E-03	-0.407
RA-226	4.424E-02		3.519E-01	6.410E-01	1.174E+00	0.069
TH-227	-4.484E-02		8.862E-02	1.469E-01	1.337E-02	-0.305
AC-228	-2.774E-02		6.450E-02	1.154E-01	9.370E-03	-0.240
TH-230	-2.975E+00		2.515E+00	4.064E+00	4.108E-01	-0.732
PA-231	2.718E-01		4.271E-01	8.203E-01	6.913E-02	0.331
PA-233	-2.429E-02		2.494E-02	3.647E-02	8.176E-03	-0.666
PA-234	-1.183E-02		3.579E-02	6.213E-02	6.989E-03	-0.190
PA-234M	4.747E-01		1.832E+00	3.776E+00	3.342E-01	0.126
TH-234	-1.190E-01		2.973E-01	5.479E-01	4.987E-02	-0.217
U-235	1.930E-02		7.796E-02	1.384E-01	2.582E-02	0.139
NP-239	9.663E-03		3.658E-02	6.760E-02	8.816E-03	0.143
AM-241	-5.697E-02		2.748E-02	4.002E-02	3.296E-03	-1.424
AM-243	-2.872E-02		1.637E-02	2.599E-02	3.049E-03	-1.105
CM-243	1.172E-02		5.896E-02	1.093E-01	8.911E-03	0.107

Summary of Nuclide Activity  
Sample ID : 1109167-02

Page : 7  
Acquisition date : 25-OCT-2011 10:37:58

Total number of lines in spectrum 22  
Number of unidentified lines 15  
Number of lines tentatively identified by NID 7 31.82%

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-231	7.04E+08Y	1.00	3.701E-01	3.701E-01	4.224E-01	114.14	
NP-237	2.14E+06Y	1.00	8.178E-02	8.178E-02	1.000E-01	122.28	
Total Activity :			4.519E-01	4.519E-01			

Grand Total Activity : 4.519E-01 4.519E-01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA,SCUSR.ARCHIVE]SMP\_110916702\_GE3\_GAS1102\_169794.CNF;1

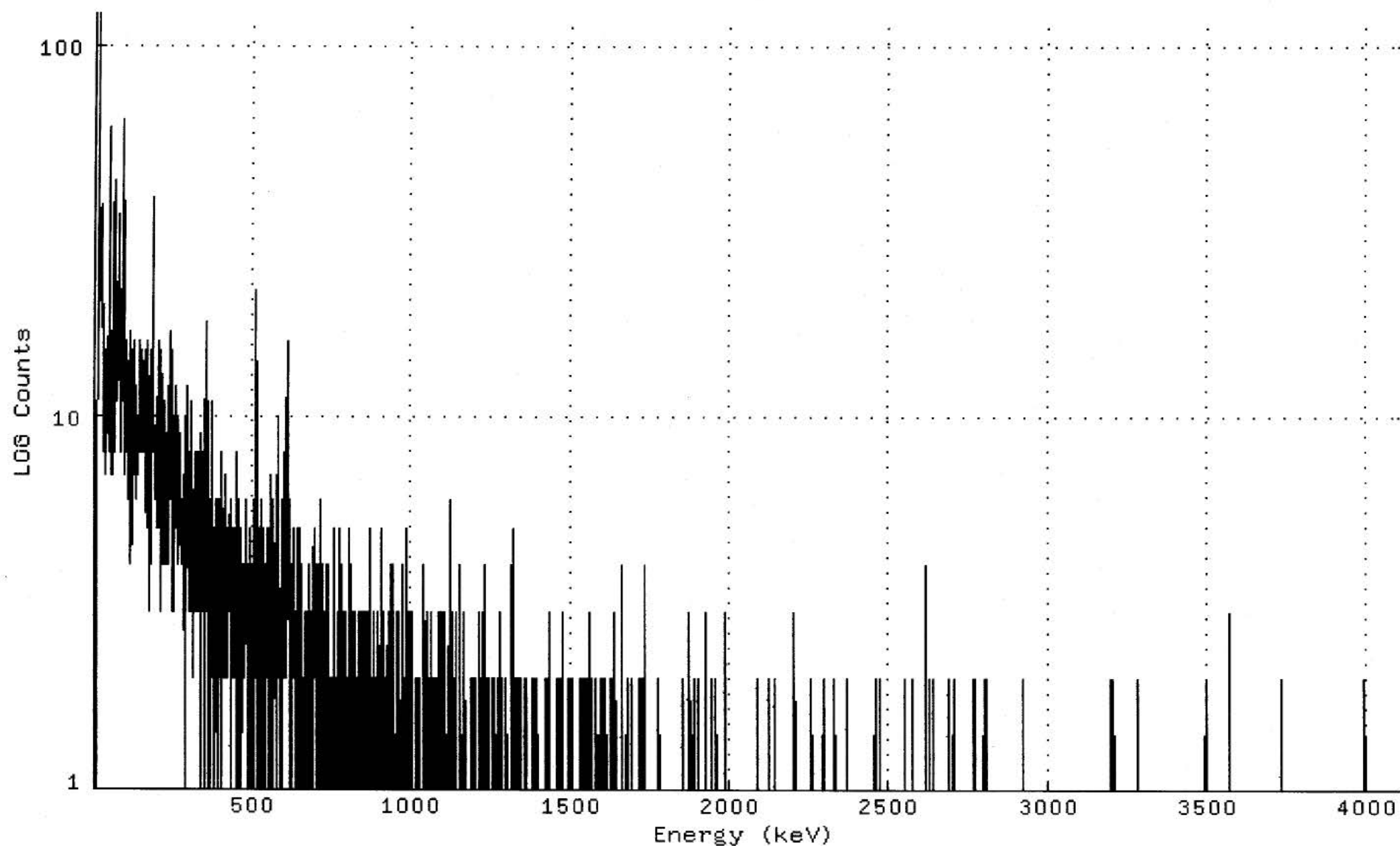
Title :

Sample Title: BLANK

Start Time: 25-OCT-2011 10:37 Sample Time: 25-OCT-2011 00:00 Energy Offset: -2.78447E-01

Real Time : 0 01:00:25.07 Sample ID : 1109167-02 Energy Slope : 9.99940E-01

Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00



## Channel Contents for DKA100:[GAMMA.SCUSR.ARCHIVE] SMP\_110916702\_GE3\_GAS1102\_1697

## Channel

1:	0	0	0	0	0	0	0	0
9:	1	122	97	51	49	43	35	29
17:	36	27	31	36	23	18	37	27
25:	24	21	23	13	8	11	20	15
33:	11	14	12	8	15	14	7	14
41:	9	11	15	11	13	21	60	11
49:	8	10	8	8	16	17	8	12
57:	7	10	14	12	7	17	33	43
65:	8	17	14	11	16	14	23	11
73:	19	16	22	23	18	35	13	13
81:	19	8	13	14	19	17	22	16
89:	11	16	19	20	63	23	7	12
97:	8	14	11	16	8	13	11	15
105:	12	13	12	12	6	14	6	12
113:	17	9	10	12	4	5	7	11
121:	11	7	15	10	15	7	12	11
129:	16	9	12	6	12	7	11	9
137:	9	10	7	10	7	9	10	14
145:	16	8	8	9	8	9	15	9
153:	13	14	12	9	9	11	8	10
161:	10	15	9	11	6	5	14	16
169:	8	8	8	8	3	7	8	7
177:	11	15	10	4	6	12	13	8
185:	14	39	17	11	10	9	8	6
193:	7	6	6	10	6	10	5	10
201:	8	16	8	12	7	5	7	14
209:	7	5	13	15	3	13	5	7
217:	4	4	7	6	11	5	7	10
225:	4	7	9	5	5	4	8	4
233:	9	12	8	4	12	9	13	17
241:	6	6	10	4	6	8	13	3
249:	15	6	10	3	9	3	9	8
257:	12	6	6	7	5	9	4	4
265:	6	10	8	9	7	7	9	7
273:	5	4	4	6	5	4	5	6
281:	7	3	7	3	7	1	10	10
289:	3	1	3	5	8	7	7	12
297:	6	6	4	8	5	7	3	9
305:	11	4	3	5	8	5	3	2
313:	4	3	5	8	4	3	5	4
321:	3	7	3	7	8	3	7	4
329:	3	5	4	7	8	7	4	6
337:	4	0	9	7	4	4	4	3
345:	8	3	1	5	7	6	7	18
353:	9	5	3	8	7	2	4	7
361:	6	11	1	6	1	6	4	5
369:	3	3	2	4	11	3	5	3
377:	4	1	2	5	3	5	3	6
385:	2	6	2	1	6	5	4	6
393:	6	6	2	4	4	3	6	6
401:	1	8	3	6	8	4	2	4
409:	3	3	4	3	7	6	2	2
417:	2	5	2	4	4	2	4	3
425:	3	4	3	3	5	6	4	0

433:	3	6	3	5	2	2	2	2
441:	4	3	2	2	5	2	4	0
449:	3	5	3	2	8	4	1	0
457:	5	6	3	3	3	4	4	5
465:	1	2	4	2	2	2	4	2
473:	4	3	2	2	2	3	4	6
481:	5	3	5	3	4	4	1	4
489:	1	3	3	5	0	2	4	0
497:	3	2	1	2	4	3	1	2
505:	6	1	3	5	2	9	17	17
513:	22	9	2	2	0	5	3	5
521:	3	2	1	4	5	0	1	3
529:	4	6	1	2	3	3	1	5
537:	3	4	2	2	2	0	4	3
545:	2	2	4	2	5	1	4	5
553:	2	2	0	2	5	1	7	6
561:	3	3	0	1	4	6	1	3
569:	4	2	4	3	3	7	0	2
577:	2	2	3	2	3	4	8	10
585:	3	2	2	3	1	1	2	6
593:	0	4	2	2	3	3	4	5
601:	2	8	5	5	3	4	3	2
609:	8	16	8	4	3	4	4	2
617:	6	1	0	0	1	2	4	4
625:	1	1	2	2	2	4	4	5
633:	3	2	2	3	2	0	0	5
641:	1	3	1	0	0	2	1	5
649:	4	3	1	1	2	0	1	4
657:	2	2	1	0	1	1	0	2
665:	2	1	0	3	3	2	3	1
673:	2	3	0	3	4	2	1	4
681:	0	3	1	2	1	1	2	3
689:	1	2	3	2	4	5	2	2
697:	5	3	5	1	1	3	2	1
705:	4	4	3	3	1	3	1	2
713:	6	4	2	1	1	3	0	2
721:	3	3	4	0	1	2	1	3
729:	1	1	4	2	1	3	2	4
737:	0	1	0	0	1	2	2	0
745:	0	1	1	1	1	2	1	2
753:	2	1	0	5	1	1	0	1
761:	1	2	1	1	2	1	3	3
769:	1	2	2	4	0	5	2	3
777:	1	1	0	1	2	3	4	1
785:	3	0	1	1	2	1	1	0
793:	1	3	3	1	0	1	1	2
801:	1	0	5	2	1	2	1	1
809:	4	3	1	2	3	0	3	2
817:	1	2	1	2	3	3	0	1
825:	2	2	0	2	2	2	1	0
833:	0	1	3	0	2	1	3	3
841:	0	2	3	3	1	0	2	1
849:	3	2	2	1	0	3	2	1
857:	3	2	2	2	1	3	1	2
865:	1	0	1	2	1	2	0	5
873:	1	2	2	0	0	1	0	1
881:	2	3	2	2	0	1	1	2
889:	1	2	1	1	1	3	1	1
897:	0	1	1	1	2	0	2	3
905:	5	3	2	2	1	3	2	2

913:	2	1	1	1	2	2	2	1
921:	0	1	0	0	1	0	2	3
929:	0	1	1	0	0	2	3	0
937:	0	4	2	1	0	1	3	4
945:	2	0	1	0	1	0	1	0
953:	1	3	0	0	0	2	1	2
961:	0	3	3	0	1	1	1	1
969:	1	2	1	0	0	0	4	1
977:	0	1	2	1	0	2	1	2
985:	1	5	0	1	0	3	1	0
993:	1	2	1	1	1	1	3	1
1001:	2	3	1	1	0	1	1	0
1009:	0	1	1	1	1	2	1	1
1017:	0	1	2	0	1	1	0	0
1025:	0	0	2	0	1	1	0	0
1033:	1	0	0	0	0	0	2	0
1041:	4	2	0	0	1	0	1	3
1049:	1	2	0	1	2	2	0	2
1057:	2	0	1	2	1	3	1	3
1065:	2	0	1	1	2	1	1	0
1073:	1	2	1	1	1	1	1	0
1081:	2	0	2	2	2	1	3	3
1089:	2	2	0	3	1	3	0	0
1097:	1	1	3	1	2	1	0	0
1105:	3	0	2	0	1	1	1	1
1113:	0	1	0	1	1	0	2	3
1121:	6	0	1	1	1	1	0	0
1129:	1	3	3	0	0	0	1	2
1137:	1	0	0	1	3	2	1	1
1145:	0	0	0	1	1	1	4	2
1153:	0	0	1	1	1	0	0	0
1161:	0	2	1	1	1	1	3	1
1169:	0	1	1	1	0	1	1	0
1177:	1	0	0	0	0	0	1	0
1185:	0	1	1	1	0	2	0	2
1193:	0	0	1	0	1	2	0	1
1201:	1	0	0	0	0	0	0	1
1209:	1	0	0	0	3	0	0	0
1217:	1	2	0	0	0	1	1	1
1225:	0	1	3	2	1	1	1	2
1233:	4	0	0	2	2	1	0	2
1241:	1	2	1	0	1	1	1	0
1249:	0	1	0	1	1	2	1	0
1257:	1	2	2	0	1	2	1	0
1265:	0	0	0	0	1	2	1	0
1273:	0	0	1	0	3	1	0	0
1281:	1	1	0	2	1	1	0	0
1289:	0	0	0	1	0	0	0	0
1297:	0	1	2	1	0	1	0	0
1305:	1	1	1	0	0	1	0	1
1313:	0	0	0	2	4	0	5	1
1321:	0	0	0	0	0	1	1	2
1329:	1	0	1	1	2	1	0	0
1337:	1	2	0	1	2	2	0	2
1345:	1	0	0	1	0	1	0	1
1353:	1	0	0	0	1	2	1	1
1361:	2	1	1	2	1	0	1	0
1369:	0	1	0	1	0	0	1	0
1377:	0	0	1	2	1	0	1	2
1385:	1	2	1	1	0	1	0	2



1393:	2	2	1	0	0	1	0	0
1401:	0	0	1	0	0	0	0	0
1409:	0	1	0	0	0	1	0	1
1417:	0	0	1	2	0	1	2	0
1425:	0	2	0	0	2	2	1	1
1433:	0	1	3	0	1	0	1	1
1441:	0	0	0	0	0	1	1	1
1449:	0	1	0	0	0	0	1	0
1457:	2	2	2	0	2	1	2	1
1465:	0	0	1	0	1	0	0	2
1473:	0	1	1	0	3	0	1	1
1481:	0	0	1	0	1	0	1	0
1489:	1	1	0	2	0	1	0	0
1497:	2	0	1	0	0	1	0	1
1505:	0	2	0	0	1	0	0	0
1513:	0	0	1	0	0	0	0	1
1521:	0	0	0	0	0	0	0	0
1529:	0	0	1	2	0	0	0	0
1537:	2	1	0	0	2	0	1	1
1545:	1	0	1	0	2	1	0	1
1553:	0	0	2	0	3	0	0	0
1561:	0	0	0	0	0	1	2	0
1569:	1	0	0	1	0	0	1	1
1577:	1	0	0	2	0	0	0	1
1585:	0	1	0	1	0	0	0	1
1593:	2	0	1	1	0	2	2	1
1601:	1	1	2	0	0	1	0	1
1609:	0	2	1	0	0	0	0	1
1617:	0	0	0	0	1	1	0	2
1625:	0	0	0	0	2	0	0	0
1633:	0	1	0	0	0	1	1	3
1641:	0	1	0	0	0	0	0	1
1649:	0	0	0	1	0	0	0	0
1657:	1	1	0	0	0	2	4	1
1665:	0	0	0	0	0	1	0	0
1673:	1	0	0	1	2	1	0	0
1681:	1	0	1	0	1	1	1	0
1689:	0	2	0	0	1	0	0	0
1697:	1	0	0	1	1	0	1	0
1705:	1	0	1	0	0	0	0	0
1713:	0	0	0	2	1	1	2	2
1721:	1	0	0	1	2	0	0	1
1729:	0	0	0	0	0	1	4	1
1737:	1	0	0	0	0	0	0	1
1745:	0	0	1	0	0	0	0	0
1753:	0	0	1	0	0	0	0	1
1761:	0	0	1	1	1	1	0	0
1769:	0	1	0	1	0	0	0	0
1777:	0	2	1	1	0	1	0	0
1785:	0	0	0	0	0	0	0	0
1793:	1	1	0	0	1	0	1	0
1801:	0	1	0	0	0	1	1	1
1809:	0	0	0	1	0	0	0	0
1817:	0	0	0	0	0	0	0	0
1825:	1	1	1	1	0	0	0	1
1833:	0	1	0	1	1	1	0	0
1841:	0	1	0	0	0	0	0	0
1849:	0	0	0	0	0	0	2	0
1857:	0	0	0	1	0	0	0	0
1865:	0	0	1	0	0	0	0	0

1873:	1	3	0	0	0	0	0	0
1881:	0	1	0	1	1	0	2	0
1889:	0	0	0	0	0	0	1	0
1897:	0	1	0	0	0	0	2	0
1905:	1	0	0	0	1	0	1	1
1913:	0	0	0	0	0	0	0	0
1921:	0	1	1	0	3	0	1	1
1929:	0	0	0	0	0	0	1	0
1937:	0	0	1	0	0	1	0	2
1945:	0	0	0	0	1	0	1	1
1953:	0	0	0	2	0	2	1	1
1961:	0	1	0	0	0	0	1	0
1969:	0	0	0	0	0	0	0	0
1977:	1	0	0	1	0	0	0	0
1985:	0	0	3	1	0	0	0	0
1993:	1	1	0	0	0	0	0	0
2001:	0	0	0	0	1	0	1	0
2009:	0	0	0	0	0	1	0	0
2017:	0	0	0	1	0	0	0	0
2025:	1	0	0	1	1	0	0	0
2033:	0	0	0	0	0	0	0	0
2041:	0	0	0	0	1	0	0	0
2049:	0	1	0	1	0	0	0	0
2057:	1	0	0	1	1	0	0	0
2065:	1	0	0	0	0	0	1	1
2073:	1	0	0	1	0	0	0	0
2081:	0	0	0	0	1	1	0	2
2089:	1	0	1	1	0	0	0	0
2097:	0	0	0	1	1	1	1	1
2105:	1	0	0	0	1	1	1	0
2113:	1	0	1	1	0	1	1	0
2121:	0	0	2	0	0	0	1	0
2129:	0	0	0	0	0	0	0	0
2137:	0	1	0	0	0	2	0	0
2145:	1	0	0	0	1	0	0	1
2153:	0	1	0	0	0	0	0	0
2161:	0	0	0	1	1	0	1	0
2169:	0	0	1	1	0	1	1	0
2177:	1	1	0	0	0	1	0	0
2185:	1	1	0	0	1	1	0	0
2193:	0	0	0	1	1	0	1	0
2201:	0	0	0	3	0	1	0	0
2209:	0	0	0	0	1	0	0	0
2217:	0	0	0	0	0	0	0	0
2225:	0	0	0	1	0	0	1	0
2233:	0	1	0	0	1	0	0	0
2241:	1	0	0	0	1	0	1	0
2249:	0	0	0	0	1	0	0	0
2257:	0	2	0	0	0	0	0	0
2265:	0	0	0	0	0	0	0	0
2273:	1	0	0	1	0	0	0	0
2281:	0	0	0	0	0	0	0	0
2289:	0	0	0	0	0	0	2	0
2297:	1	0	0	0	0	0	1	0
2305:	1	0	0	0	1	0	0	0
2313:	0	1	0	0	1	0	0	0
2321:	0	0	0	0	0	0	0	0
2329:	1	2	0	0	1	0	0	1
2337:	1	0	0	1	0	0	0	0
2345:	0	0	1	0	0	0	1	0

2353:	0	0	0	0	0	0	0	0
2361:	0	0	1	0	1	0	0	0
2369:	2	0	0	0	0	1	0	1
2377:	0	0	0	1	0	0	0	0
2385:	0	0	0	0	0	0	0	0
2393:	0	1	0	0	0	1	0	0
2401:	0	0	0	0	0	0	0	0
2409:	0	1	0	0	0	0	0	0
2417:	1	0	0	0	0	0	0	0
2425:	0	0	0	1	0	0	0	0
2433:	0	0	0	0	0	0	1	0
2441:	0	0	0	0	0	0	0	0
2449:	0	0	0	0	0	0	0	0
2457:	2	0	0	1	0	0	0	0
2465:	0	0	0	0	0	0	2	0
2473:	0	0	1	0	0	0	0	0
2481:	0	0	0	0	0	0	0	0
2489:	0	0	0	0	1	0	0	1
2497:	0	0	1	0	1	0	0	0
2505:	0	0	0	0	0	0	0	0
2513:	0	0	0	0	0	0	0	0
2521:	0	0	0	1	0	0	0	0
2529:	0	0	0	1	1	0	0	0
2537:	0	0	0	0	1	1	0	0
2545:	0	1	1	0	2	0	0	0
2553:	0	0	1	0	0	0	0	0
2561:	0	0	0	0	0	0	0	0
2569:	0	0	0	2	0	0	1	0
2577:	1	0	0	0	0	0	0	0
2585:	0	0	0	0	1	0	0	0
2593:	0	0	0	0	0	0	1	0
2601:	0	0	0	0	0	0	0	0
2609:	0	0	1	0	0	0	2	4
2617:	1	0	0	0	0	0	0	0
2625:	1	0	0	2	1	0	0	0
2633:	0	1	0	0	0	0	1	2
2641:	0	1	0	0	0	0	0	0
2649:	0	0	1	0	0	0	0	1
2657:	0	0	0	0	0	0	0	0
2665:	1	1	0	0	0	0	1	0
2673:	0	1	0	0	0	0	0	0
2681:	0	0	0	0	0	0	2	1
2689:	0	0	0	0	0	0	0	0
2697:	0	0	0	0	0	0	2	0
2705:	0	0	2	0	1	0	1	0
2713:	0	0	1	0	1	0	0	0
2721:	1	0	0	0	1	0	0	0
2729:	0	0	0	0	0	0	0	0
2737:	0	0	0	0	1	0	0	0
2745:	0	0	0	1	1	0	0	1
2753:	0	0	0	0	0	0	1	0
2761:	0	1	0	2	0	0	1	1
2769:	2	0	1	0	0	0	1	0
2777:	0	0	0	0	0	0	0	0
2785:	0	0	0	0	1	0	1	0
2793:	1	1	0	0	0	2	0	1
2801:	1	0	1	0	2	0	1	0
2809:	0	0	1	0	0	0	1	0
2817:	0	1	1	1	0	0	0	0
2825:	0	1	0	0	1	0	0	0

2833:	0	0	1	0	0	1	0	0
2841:	0	0	0	0	0	0	0	0
2849:	0	0	0	0	0	0	0	1
2857:	0	0	0	1	0	0	0	0
2865:	0	0	0	0	0	0	0	0
2873:	0	0	0	0	1	0	0	0
2881:	0	0	0	0	0	0	1	0
2889:	0	0	0	0	0	0	0	0
2897:	0	0	0	0	0	0	0	0
2905:	0	0	0	0	0	0	1	0
2913:	0	0	0	1	0	0	2	1
2921:	0	0	0	1	0	0	0	0
2929:	0	0	0	0	1	0	0	0
2937:	0	0	0	0	0	0	0	0
2945:	0	0	0	0	0	0	0	1
2953:	0	0	1	1	0	0	1	0
2961:	0	0	0	0	0	0	0	1
2969:	0	0	0	0	0	1	1	0
2977:	1	0	0	0	0	1	0	0
2985:	0	0	1	0	0	0	0	0
2993:	0	0	0	0	0	1	0	0
3001:	0	0	0	0	0	0	0	0
3009:	0	0	0	0	0	1	0	0
3017:	0	1	0	1	0	0	0	0
3025:	0	0	0	0	1	1	0	0
3033:	0	0	0	0	0	1	0	1
3041:	0	0	1	0	0	0	0	0
3049:	0	0	0	0	0	1	0	0
3057:	0	1	1	1	0	0	0	0
3065:	0	0	0	0	0	0	0	0
3073:	0	0	0	0	0	0	0	0
3081:	0	0	1	0	0	0	0	0
3089:	0	1	0	0	0	0	0	0
3097:	0	0	0	0	0	0	0	0
3105:	0	0	0	0	0	0	0	1
3113:	0	0	0	0	0	0	0	0
3121:	0	0	1	0	0	0	0	0
3129:	0	0	0	0	1	0	0	0
3137:	0	0	0	0	0	0	0	0
3145:	0	0	0	1	0	0	0	0
3153:	0	0	0	0	0	0	0	0
3161:	0	0	0	0	0	1	0	0
3169:	0	1	0	0	0	0	0	0
3177:	0	0	0	0	0	0	1	0
3185:	0	0	0	0	0	0	0	0
3193:	0	0	0	0	1	0	2	0
3201:	0	0	1	1	2	0	0	0
3209:	0	0	0	0	0	0	0	0
3217:	0	0	0	0	0	0	0	0
3225:	0	1	0	0	0	0	0	0
3233:	1	0	0	0	0	0	1	0
3241:	0	0	1	0	0	0	0	1
3249:	0	0	0	0	0	0	0	0
3257:	0	0	1	0	0	0	0	0
3265:	0	0	1	0	0	0	0	0
3273:	1	1	1	1	0	1	0	0
3281:	0	2	0	0	0	0	0	0
3289:	1	0	0	0	0	0	0	0
3297:	0	0	0	0	0	0	0	0
3305:	0	1	0	0	0	0	0	0

3313:	0	0	0	0	0	0	0	0
3321:	0	0	0	0	0	0	0	0
3329:	0	1	0	0	1	0	0	0
3337:	0	0	0	0	0	0	0	0
3345:	1	0	0	0	0	0	1	0
3353:	0	0	0	0	1	0	0	0
3361:	0	0	0	0	0	0	0	1
3369:	0	0	0	0	0	0	0	0
3377:	0	0	0	0	0	0	1	0
3385:	0	0	0	1	0	0	1	0
3393:	0	0	0	1	0	0	0	0
3401:	0	0	0	0	0	0	0	0
3409:	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	0	0
3433:	0	0	0	0	1	0	0	0
3441:	0	0	0	0	1	0	0	0
3449:	0	0	0	0	0	0	0	0
3457:	0	0	0	0	0	0	0	1
3465:	0	0	0	0	0	0	0	0
3473:	0	1	0	0	0	0	0	0
3481:	0	0	1	0	0	0	0	0
3489:	0	0	0	0	0	2	0	0
3497:	0	0	0	0	0	0	0	0
3505:	0	0	0	0	0	1	0	0
3513:	1	0	0	0	0	0	0	0
3521:	1	0	0	0	0	0	0	0
3529:	0	0	0	0	0	0	0	0
3537:	0	0	1	0	1	0	0	0
3545:	0	0	0	0	0	1	0	0
3553:	0	0	0	0	0	0	0	0
3561:	0	0	0	0	0	1	0	0
3569:	3	1	0	0	0	1	0	0
3577:	0	0	0	1	0	0	0	0
3585:	0	0	0	0	0	1	1	0
3593:	0	1	0	0	1	0	0	0
3601:	0	0	0	0	0	0	1	0
3609:	0	0	0	0	0	0	0	0
3617:	0	0	1	0	0	0	0	0
3625:	0	0	0	1	0	0	0	0
3633:	0	0	0	0	0	0	0	0
3641:	0	0	0	1	0	0	0	0
3649:	0	0	0	0	0	0	0	0
3657:	1	0	0	0	0	0	0	0
3665:	0	0	0	0	0	0	0	0
3673:	0	0	0	0	0	0	0	1
3681:	0	0	0	0	0	0	0	0
3689:	0	0	0	0	0	0	0	0
3697:	0	0	0	0	0	0	0	0
3705:	0	0	0	0	1	0	0	0
3713:	0	0	0	0	0	0	0	0
3721:	0	0	0	0	0	0	0	0
3729:	0	0	2	1	0	0	0	0
3737:	0	0	1	0	0	0	0	0
3745:	0	1	0	0	0	0	0	0
3753:	0	0	1	0	0	0	0	0
3761:	0	0	0	0	0	0	0	1
3769:	0	0	0	0	1	0	0	0
3777:	0	0	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	1

3793:	0	0	0	0	0	0	0	0
3801:	0	1	0	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0
3825:	0	0	0	0	0	1	0	0
3833:	0	0	0	0	0	0	0	0
3841:	0	0	0	0	0	0	0	0
3849:	1	0	0	0	0	0	0	0
3857:	0	0	0	0	0	0	0	0
3865:	0	0	0	1	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	1	0	0	0	0	0	0
3889:	0	0	0	0	0	0	1	0
3897:	0	1	0	0	0	0	0	0
3905:	1	0	0	0	0	0	0	0
3913:	0	1	0	0	0	0	1	1
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	0	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	0
3969:	0	0	0	1	0	0	0	1
3977:	1	0	0	0	0	0	0	0
3985:	0	0	0	0	0	0	2	0
3993:	0	1	0	0	0	0	0	0
4001:	0	1	0	0	0	0	0	0
4009:	0	0	0	1	0	0	0	0
4017:	0	0	0	0	0	1	0	0
4025:	0	0	0	0	1	0	0	0
4033:	0	0	0	0	0	0	1	0
4041:	0	0	0	0	0	0	0	0
4049:	0	0	0	0	0	0	0	0
4057:	0	0	1	0	0	0	0	0
4065:	1	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	1	0
4089:	0	0	0	0	0	0	0	0

Sample ID : 1109167-03

Page : 1  
Acquisition date : 25-OCT-2011 06:43:28

VAX/VMS Peak Search Report Generated 25-OCT-2011 07:45:30.07

10/25/11

Configuration : DKA100: [GAMMA.SCUSR.ARCHIVE] SMP\_110916703\_GE4\_GAS1102\_169775.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : AR-01-31-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 06:43:28  
 Sample ID : 1109167-03 Sample Quantity : 4.22940E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE4 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:01:44.05 2.8%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	46.15*	8745	37864	2.04	45.56	43	6	7.3		PB-210
0	52.68*	5778	49397	1.98	52.09	49	7	13.0		
6	60.39*	9049	67249	3.53	59.81	56	26	10.9	6.36E+02	AM-241
6	63.94*	10412	82776	3.54	63.36	56	26	11.3		TH-234
6	68.13	14249	83599	3.54	67.54	56	26	8.4		
6	76.13	136193	86514	3.56	75.55	56	26	1.0		AM-243
1	83.39*	2825	15858	1.85	82.81	82	11	11.2	1.36E+02	
1	86.77	25028	45051	1.94	86.20	82	11	3.0		NP-237 SN-126 CD-109
1	89.37	9702	50041	2.23	88.80	82	11	8.6		
10	151.67	3022	76551	5.39	151.13	138	19	36.8	3.36E+00	
0	185.91*	24688	54821	2.21	185.39	181	10	3.8		RA-226
0	196.40	460	30495	1.94	195.88	194	6	120.4		
0	211.74	597	24684	2.89	211.23	209	6	83.8		
0	241.84	34635	38089	2.11	241.34	236	11	2.4		RA-224
0	258.46	2543	23431	2.23	257.98	255	8	21.3		
0	272.24	2955	30097	6.07	271.76	266	11	23.0		LU-173
0	295.01	71526	24636	2.20	294.54	290	10	1.1		PB-214
4	347.71	909	11615	2.52	347.27	344	13	38.6	4.92E+00	
4	351.72*	115089	11005	2.05	351.27	344	13	0.7		PB-214
0	387.76	1734	11635	3.37	387.34	384	7	21.2		
0	405.08	426	10549	2.93	404.66	402	6	77.0		
0	409.85	256	8599	2.62	409.43	408	5	109.4		
0	454.40	761	8058	2.18	454.01	451	7	39.8		
0	461.65	697	7633	2.38	461.26	458	7	42.3		
0	469.54	366	6388	2.49	469.16	467	6	69.9		
0	480.62	762	5910	2.12	480.24	478	6	32.7		
0	486.90	953	6788	2.29	486.52	484	7	29.4		
0	494.38	203	5430	3.08	494.01	492	6	116.0		
0	510.59*	1381	8433	3.40	510.23	505	10	25.5		
0	532.50	226	4977	2.54	532.15	530	6	99.7		
0	580.01	528	6008	2.13	579.68	577	8	51.7		
0	609.10*	79792	6857	2.27	608.78	603	11	0.8		BI-214
0	633.60	172	3230	3.37	633.30	631	6	105.9		
0	648.25	160	2518	2.63	647.95	646	5	95.4		

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0077

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	664.85	2520	6071	2.20	664.56	658	12	13.0		
0	701.80	842	6477	2.37	701.53	695	13	40.0		
0	709.45	219	2846	3.26	709.18	707	6	78.2		
0	719.94	685	4275	2.72	719.67	716	9	35.3		
0	742.06	471	4300	2.41	741.81	738	9	51.0		
0	753.18	256	3053	1.69	752.93	750	7	72.6		
0	768.06	7144	5486	2.41	767.82	761	12	4.8		
0	785.57	1576	4046	2.48	785.34	781	9	15.4		
0	806.00	1687	3995	2.30	805.78	802	9	14.4		
0	820.62	169	2778	2.02	820.41	818	6	99.8		
0	826.35	245	3126	2.62	826.14	823	7	76.8		
0	838.98	810	3584	2.42	838.78	835	8	26.6		
0	934.02	3456	5000	2.44	933.86	927	12	8.9		
0	963.50	397	3078	2.84	963.35	960	8	49.4		
0	1031.43	104	1517	2.78	1031.32	1030	5	114.4		
0	1051.79	283	2522	2.12	1051.69	1048	8	62.7		
0	1070.23*	306	1979	1.93	1070.14	1067	7	49.6		
0	1103.48	221	1855	3.18	1103.41	1101	7	66.2		
0	1120.09	14413	3854	2.49	1120.02	1113	14	2.5		BI-214
0	1133.49	288	2373	2.59	1133.43	1129	9	62.2		
0	1155.24	1682	2867	2.56	1155.19	1150	11	13.3		
0	1183.08	349	2324	3.83	1183.04	1178	10	53.0		
0	1191.88	124	1544	5.57	1191.85	1188	7	106.6		
0	1207.72	428	2017	2.40	1207.69	1204	9	39.1		
0	1238.02	5213	2509	2.53	1238.01	1233	12	4.8		
0	1253.50	334	2253	2.39	1253.50	1248	11	56.1		
0	1280.96	1253	2243	2.62	1280.97	1276	11	15.7		
0	1349.05	111	1457	2.46	1349.09	1346	8	120.6		
2	1377.48	3705	1367	2.48	1377.54	1371	20	4.7	8.33E-01	
2	1385.10	763	1661	3.06	1385.16	1371	20	20.8		
2	1401.43	1142	1538	2.78	1401.50	1397	15	13.2	2.40E+00	
2	1407.87	1874	1524	2.61	1407.94	1397	15	8.6		
0	1416.06	112	1548	2.45	1416.13	1413	8	122.5		
0	1425.40	187	1101	2.47	1425.48	1423	6	58.0		
0	1460.10*	187	1645	3.10	1460.20	1457	8	76.6		K-40
0	1509.12	1574	2178	2.35	1509.24	1505	10	12.2		
2	1538.38	477	1691	3.10	1538.52	1531	17	32.4	1.67E+00	
2	1543.33	333	1409	2.74	1543.47	1531	17	42.3		
0	1582.95	608	1622	3.37	1583.10	1577	12	27.7		
5	1594.92	311	1482	3.52	1595.08	1589	15	50.1	7.74E-01	
5	1599.49	225	1079	2.54	1599.66	1589	15	53.1		
0	1660.95	778	998	2.61	1661.15	1654	12	17.7		
0	1682.87	131	584	3.31	1683.08	1680	8	66.2		
0	1693.31	210	677	3.40	1693.52	1689	9	46.9		
0	1729.49	2155	869	2.62	1729.72	1724	13	7.1		
0	1764.35*	10820	764	2.73	1764.59	1757	14	2.2		BI-214
3	1838.20	270	499	3.50	1838.49	1833	22	34.8	1.02E+00	
3	1847.30*	1404	381	2.75	1847.58	1833	22	7.2		
0	1873.39	181	362	2.45	1873.69	1870	8	39.3		
3	1883.08	49	422	3.52	1883.39	1879	27	154.1	1.00E+00	
3	1889.84	105	512	3.52	1890.15	1879	27	87.0		



It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
3	1895.67	142	510	3.52	1895.98	1879	27	64.7		
0	1937.28	132	581	2.23	1937.61	1933	11	73.5		
0	1997.69	50	233	2.61	1998.05	1995		8110.7		
0	2085.25	69	292	10.11	2085.66	2078		15110.8		
0	2110.03	68	181	3.60	2110.45	2105	10	78.1		
0	2118.50	746	157	3.21	2118.92	2114	11	9.8		
0	2191.44	42	150	2.91	2191.90	2188		9108.5		
0	2203.94*	2790	274	2.99	2204.40	2197	15	4.6		BI-214
0	2293.56	167	96	3.52	2294.06	2288	15	30.4		
0	2404.46	12	17	2.01	2405.02	2402		9131.2		
0	2447.50	890	24	3.14	2448.08	2440	14	7.1		
0	2465.47	15	7	3.40	2466.06	2462	8	84.5		
0	2483.14	10	6	2.69	2483.74	2477		11115.5		
0	2507.07	13	5	3.53	2507.68	2502	9	80.2		
0	2614.41	33	2	1.81	2615.07	2610	10	39.5		
0	2683.08	9	0	1.66	2683.78	2680	8	66.7		
0	2692.88	19	0	5.49	2693.58	2689	10	45.9		
0	2735.78	10	0	2.37	2736.50	2733	8	63.2		
0	2769.32	16	0	1.93	2770.06	2764	10	50.0		
0	2921.27	8	2	2.25	2922.08	2918	7	87.6		
0	3054.32	10	0	1.47	3055.20	3052	7	63.2		

Total number of lines in spectrum 106  
Number of unidentified lines 74  
Number of lines tentatively identified by NID 32 30.19%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.727E+01	1.727E+01	1.335E+01	77.28	
PB-210	22.26Y	1.00	2.724E+02	2.730E+02	0.322E+02	11.80	
BI-214	1602.00Y	1.00	7.481E+02	7.481E+02	0.413E+02	5.52	
PB-214	1602.00Y	1.00	7.848E+02	7.849E+02	0.634E+02	8.08	
RA-224	1.41E+10Y	1.00	1.551E+03	1.551E+03	0.161E+03	10.36	
RA-226	1602.00Y	1.00	1.087E+03	1.087E+03	1.992E+03	183.22	
TH-234	4.47E+09Y	1.00	2.968E+02	2.968E+02	0.422E+02	14.21	
AM-241	432.20Y	1.00	2.786E+01	2.786E+01	0.382E+01	13.69	
Total Activity :			4.785E+03	4.786E+03			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	7.056E+02	7.349E+02	0.938E+02	12.76	
SN-126	1.00E+05Y	1.00	7.091E+01	7.091E+01	0.798E+01	11.26	
NP-237	2.14E+06Y	1.00	2.080E+02	2.080E+02	0.232E+02	11.14	
Total Activity :			9.845E+02	1.014E+03			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
LU-173	1.37Y	1.04	2.743E+01	2.849E+01	0.717E+01	25.17	
AM-243	7380.00Y	1.00	2.165E+02	2.165E+02	0.207E+02	9.57	
Total Activity :			2.439E+02	2.450E+02			

Grand Total Activity : 6.014E+03 6.045E+03

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr 2-Sigma			Status
				pCi/GRAM	pCi/GRAM	%Error	
K-40	1460.81	10.67*	1.798E-01	1.727E+01	1.727E+01	77.28	OK
Final Mean for 1 Valid Peaks = 1.727E+01+/- 1.335E+01 ( 77.28%)							
PB-210	46.50	4.05*	1.407E+00	2.724E+02	2.730E+02	11.80	OK
Final Mean for 1 Valid Peaks = 2.730E+02+/- 3.221E+01 ( 11.80%)							
BI-214	609.31	46.30*	4.029E-01	7.592E+02	7.593E+02	11.57	OK
	1120.29	15.10	2.230E-01	7.598E+02	7.598E+02	12.08	OK
	1764.49	15.80	1.582E-01	7.686E+02	7.686E+02	9.79	OK
	2204.22	4.98	1.404E-01	7.082E+02	7.082E+02	11.10	OK
Final Mean for 4 Valid Peaks = 7.481E+02+/- 4.128E+01 ( 5.52%)							
PB-214	295.21	19.19	8.368E-01	7.906E+02	7.907E+02	10.67	OK
	351.92	37.19*	7.067E-01	7.773E+02	7.773E+02	12.36	OK
Final Mean for 2 Valid Peaks = 7.849E+02+/- 6.338E+01 ( 8.08%)							
RA-224	240.98	3.95*	1.004E+00	1.551E+03	1.551E+03	10.36	OK
Final Mean for 1 Valid Peaks = 1.551E+03+/- 1.607E+02 ( 10.36%)							
RA-226	186.21	3.28*	1.229E+00	1.087E+03	1.087E+03	183.22	OK
Final Mean for 1 Valid Peaks = 1.087E+03+/- 1.992E+03 (183.22%)							
TH-234	63.29	3.80*	1.639E+00	2.968E+02	2.968E+02	14.21	OK
Final Mean for 1 Valid Peaks = 2.968E+02+/- 4.217E+01 ( 14.21%)							
AM-241	59.54	35.90*	1.606E+00	2.786E+01	2.786E+01	13.69	OK
Final Mean for 1 Valid Peaks = 2.786E+01+/- 3.815E+00 ( 13.69%)							

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr 2-Sigma			Status
				pCi/GRAM	pCi/GRAM	%Error	
CD-109	88.03	3.72*	1.693E+00	7.056E+02	7.349E+02	12.76	OK
Final Mean for 1 Valid Peaks = 7.349E+02+/- 9.378E+01 ( 12.76%)							
SN-126	87.57	37.00*	1.693E+00	7.091E+01	7.091E+01	11.26	OK
Final Mean for 1 Valid Peaks = 7.091E+01+/- 7.981E+00 ( 11.26%)							

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
NP-237	86.50	12.60*	1.695E+00	2.080E+02	2.080E+02	11.14	OK

Final Mean for 1 Valid Peaks = 2.080E+02+/- 2.317E+01 ( 11.14%)

Nuclide Type: ACTIVATION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
LU-173	100.72	5.24	1.657E+00	-----	Line Not Found	-----	Absent
	272.11	21.20*	9.019E-01	2.743E+01	2.849E+01	25.17	OK

Final Mean for 1 Valid Peaks = 2.849E+01+/- 7.170E+00 ( 25.17%)

AM-243	74.67	66.00*	1.692E+00	2.165E+02	2.165E+02	9.57	OK
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Final Mean for 1 Valid Peaks = 2.165E+02+/- 2.072E+01 ( 9.57%)

Flag: "\*" = Keyline

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	1.727E+01	1.335E+01	1.720E+01	1.617E+00	1.004
CD-109	7.349E+02	9.378E+01	2.775E+01	3.257E+00	26.487
SN-126	7.091E+01	7.981E+00	2.677E+00	2.699E-01	26.490
LU-173	2.849E+01	7.170E+00	6.030E+00	5.624E-01	4.724
PB-210	2.730E+02	3.221E+01	2.715E+01	2.260E+00	10.056
BI-214	7.481E+02	4.128E+01	2.992E+00	3.240E-01	250.008
PB-214	7.849E+02	6.338E+01	3.484E+00	4.067E-01	225.262
RA-224	1.551E+03	1.607E+02	3.118E+01	2.882E+00	49.744
RA-226	1.087E+03	1.992E+03	3.783E+01	6.928E+01	28.740
TH-234	2.968E+02	4.217E+01	2.854E+01	2.165E+00	10.397
NP-237	2.080E+02	2.317E+01	7.851E+00	7.813E-01	26.496
AM-241	2.786E+01	3.815E+00	3.080E+00	2.247E-01	9.046
AM-243	2.165E+02	2.072E+01	1.597E+00	1.379E-01	135.577

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.534E+01		1.676E+01	1.893E+01	2.456E+00	0.810
NA-22	7.751E-02		1.151E+00	1.720E+00	1.658E-01	0.045
AL-26	6.336E-02		6.242E-01	1.065E+00	9.079E-02	0.060
TI-44	1.608E+01	+	1.968E+00	1.349E+00	1.077E-01	11.914
SC-46	-3.282E-01		1.331E+00	2.261E+00	2.976E-01	-0.145
V-48	-2.833E+00		3.298E+00	5.515E+00	7.022E-01	-0.514
CR-51	-3.806E+00		1.571E+01	2.534E+01	2.788E+00	-0.150
MN-54	2.258E+00		1.598E+00	1.797E+00	2.194E-01	1.257
CO-56	-1.882E-01		1.414E+00	2.125E+00	2.639E-01	-0.089
CO-57	-1.061E+00		7.894E-01	1.275E+00	1.175E-01	-0.833
CO-58	9.185E-01		1.505E+00	2.137E+00	2.523E-01	0.430
FE-59	2.842E+00		3.041E+00	4.607E+00	5.513E-01	0.617
CO-60	7.513E-01		1.136E+00	1.718E+00	1.770E-01	0.437
ZN-65	5.187E+01		6.888E+00	5.677E+00	6.362E-01	9.137
SE-75	-5.195E-01		2.082E+00	2.358E+00	2.210E-01	-0.220
RB-82	4.166E+00		2.183E+01	2.419E+01	2.710E+00	0.172
RB-83	1.345E+00		2.345E+00	3.579E+00	6.481E-01	0.376
KR-85	6.645E+02		2.308E+02	3.168E+02	4.004E+01	2.097
SR-85	3.871E+00		1.345E+00	1.846E+00	2.333E-01	2.097
Y-88	2.667E+00		1.009E+00	1.616E+00	1.364E-01	1.650
NB-93M	5.912E+02		2.452E+02	4.754E+01	1.952E+01	12.435
NB-94	-4.048E-01		1.022E+00	1.733E+00	2.225E-01	-0.234
NB-95	5.940E+01		7.279E+00	4.345E+00	4.788E-01	13.669
NB-95M	-2.618E+02		6.610E+02	9.536E+02	8.787E+01	-0.275
ZR-95	2.243E+00		3.184E+00	3.573E+00	4.133E-01	0.628
RU-103	1.660E+00		1.692E+00	2.409E+00	4.106E-01	0.689
RU-106	-1.377E+01		9.073E+00	1.384E+01	2.025E+00	-0.995
AG-108M	2.347E+00		1.099E+00	1.670E+00	1.717E-01	1.405
AG-110M	5.240E-01		1.095E+00	1.564E+00	1.467E-01	0.335
SN-113	3.632E+00		1.836E+00	2.580E+00	3.405E-01	1.408

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TE123M	3.164E+00		1.171E+00	1.671E+00	1.449E-01	1.893
SB-124	-3.415E-02		1.420E+00	2.016E+00	2.217E-01	-0.017
I-125	-3.250E+01		1.717E+01	2.758E+01	2.933E+00	-1.178
SB-125	3.734E+00		3.203E+00	5.127E+00	6.785E-01	0.728
SB-126	3.063E+01	+	1.131E+01	1.328E+01	1.360E+00	2.306
SB-127	2.771E+02		3.313E+02	5.325E+02	5.134E+01	0.520
I-129	-1.769E+00		1.734E+00	2.836E+00	3.758E-01	-0.624
I-131	-5.576E+00		1.024E+01	1.641E+01	1.985E+00	-0.340
BA-133	7.053E+01		1.142E+01	3.304E+00	5.113E-01	21.344
CS-134	6.079E+01		7.252E+00	2.894E+00	3.173E-01	21.006
CS-135	8.431E+00		5.903E+00	7.781E+00	7.255E-01	1.084
CS-136	1.218E+01		6.105E+00	9.192E+00	1.127E+00	1.326
CS-137	7.078E+00		1.281E+00	1.829E+00	1.694E-01	3.869
LA-138	-1.758E-01		1.651E+00	2.690E+00	2.470E-01	-0.065
CE-139	-1.574E+00		1.052E+00	1.689E+00	1.444E-01	-0.932
BA-140	-1.758E+01		1.811E+01	2.397E+01	8.218E+00	-0.734
LA-140	2.035E+01		5.823E+00	8.866E+00	8.005E-01	2.295
CE-141	8.610E+00		3.317E+00	4.297E+00	1.015E+00	2.004
CE-144	2.227E+00		7.297E+00	1.067E+01	9.660E-01	0.209
PM-144	9.822E-01		1.040E+00	1.491E+00	1.467E-01	0.659
PM-145	-1.018E+01		7.553E+00	5.828E+00	3.807E+00	-1.747
PM-146	6.246E+00	+	2.631E+00	3.544E+00	4.638E-01	1.762
ND-147	3.687E+01	+	3.707E+01	5.874E+01	7.292E+00	0.628
EU-152	1.209E+02	+	1.790E+01	1.750E+01	1.989E+00	6.908
GD-153	-4.230E+00		2.849E+00	4.594E+00	4.437E-01	-0.921
EU-154	2.151E-01		3.196E+00	4.773E+00	4.602E-01	0.045
EU-155	8.572E+01	+	9.549E+00	4.425E+00	4.403E-01	19.371
EU-156	4.690E+00		4.155E+01	5.326E+01	1.290E+01	0.088
HO-166M	2.297E+00		2.349E+00	2.654E+00	2.678E-01	0.865
HF-172	5.446E+00		5.795E+00	9.479E+00	8.679E-01	0.575
LU-172	-3.361E-01		2.750E+01	4.520E+01	5.200E+00	-0.007
HF-175	-1.670E+00		1.457E+00	2.053E+00	2.339E-01	-0.813
LU-176	-1.608E-01		8.142E-01	1.315E+00	1.341E-01	-0.122
TA-182	3.882E+02	+	4.685E+01	1.599E+01	1.778E+00	24.273
IR-192	3.295E+00	+	2.346E+00	3.668E+00	4.779E-01	0.898
HG-203	1.305E+00		1.683E+00	2.435E+00	2.325E-01	0.536
BI-207	-1.091E-01		8.974E-01	1.434E+00	1.685E-01	-0.076
TL-208	5.749E+00		3.381E+00	4.818E+00	5.522E-01	1.193
BI-210M	6.280E+00		2.436E+00	2.754E+00	2.565E-01	2.281
PB-211	4.242E+01	+	3.317E+01	5.133E+01	6.712E+00	0.826
BI-212	1.336E+00		8.082E+00	1.226E+01	1.270E+00	0.109
PB-212	6.972E+01		7.361E+00	3.756E+00	3.467E-01	18.565
RN-219	2.262E+01		1.572E+01	2.238E+01	2.924E+00	1.011
RA-223	-5.529E+00		2.031E+01	3.275E+01	3.520E+00	-0.169
RA-225	1.167E+01		9.363E+00	1.386E+01	1.304E+00	0.842
TH-227	-2.124E+00		7.609E+00	1.099E+01	1.013E+00	-0.193
AC-228	-1.751E-01		3.893E+00	6.626E+00	8.777E-01	-0.026
TH-230	4.101E+03	+	5.016E+02	3.438E+02	2.737E+01	11.930

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-231	3.390E+01		3.732E+01	5.394E+01	5.428E+00	0.628
TH-231	5.933E+00		8.409E+00	1.390E+01	2.316E+00	0.427
PA-233	2.256E+00		4.038E+00	6.496E+00	1.506E+00	0.347
PA-234	-2.259E+00		3.206E+00	5.219E+00	4.741E-01	-0.433
PA-234M	1.595E+02		1.126E+02	1.916E+02	2.409E+01	0.832
U-235	1.883E+01		7.461E+00	1.096E+01	1.934E+00	1.719
CM-243	1.269E+01		6.341E+00	9.098E+00	8.484E-01	1.395

Total number of lines in spectrum 106  
Number of unidentified lines 74  
Number of lines tentatively identified by NID 32 30.19%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.727E+01	1.727E+01	1.335E+01	77.28	
PB-210	22.26Y	1.00	2.724E+02	2.730E+02	0.322E+02	11.80	
BI-214	1602.00Y	1.00	7.481E+02	7.481E+02	0.413E+02	5.52	
PB-214	1602.00Y	1.00	7.848E+02	7.849E+02	0.634E+02	8.08	
RA-224	1.41E+10Y	1.00	1.551E+03	1.551E+03	0.161E+03	10.36	
RA-226	1602.00Y	1.00	1.087E+03	1.087E+03	1.992E+03	183.22	
TH-234	4.47E+09Y	1.00	2.968E+02	2.968E+02	0.422E+02	14.21	
AM-241	432.20Y	1.00	2.786E+01	2.786E+01	0.382E+01	13.69	
Total Activity :			4.785E+03	4.786E+03			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	7.056E+02	7.349E+02	0.938E+02	12.76	
SN-126	1.00E+05Y	1.00	7.091E+01	7.091E+01	0.798E+01	11.26	
NP-237	2.14E+06Y	1.00	2.080E+02	2.080E+02	0.232E+02	11.14	
Total Activity :			9.845E+02	1.014E+03			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
LU-173	1.37Y	1.04	2.743E+01	2.849E+01	0.717E+01	25.17	
AM-243	7380.00Y	1.00	2.165E+02	2.165E+02	0.207E+02	9.57	
Total Activity :			2.439E+02	2.450E+02			

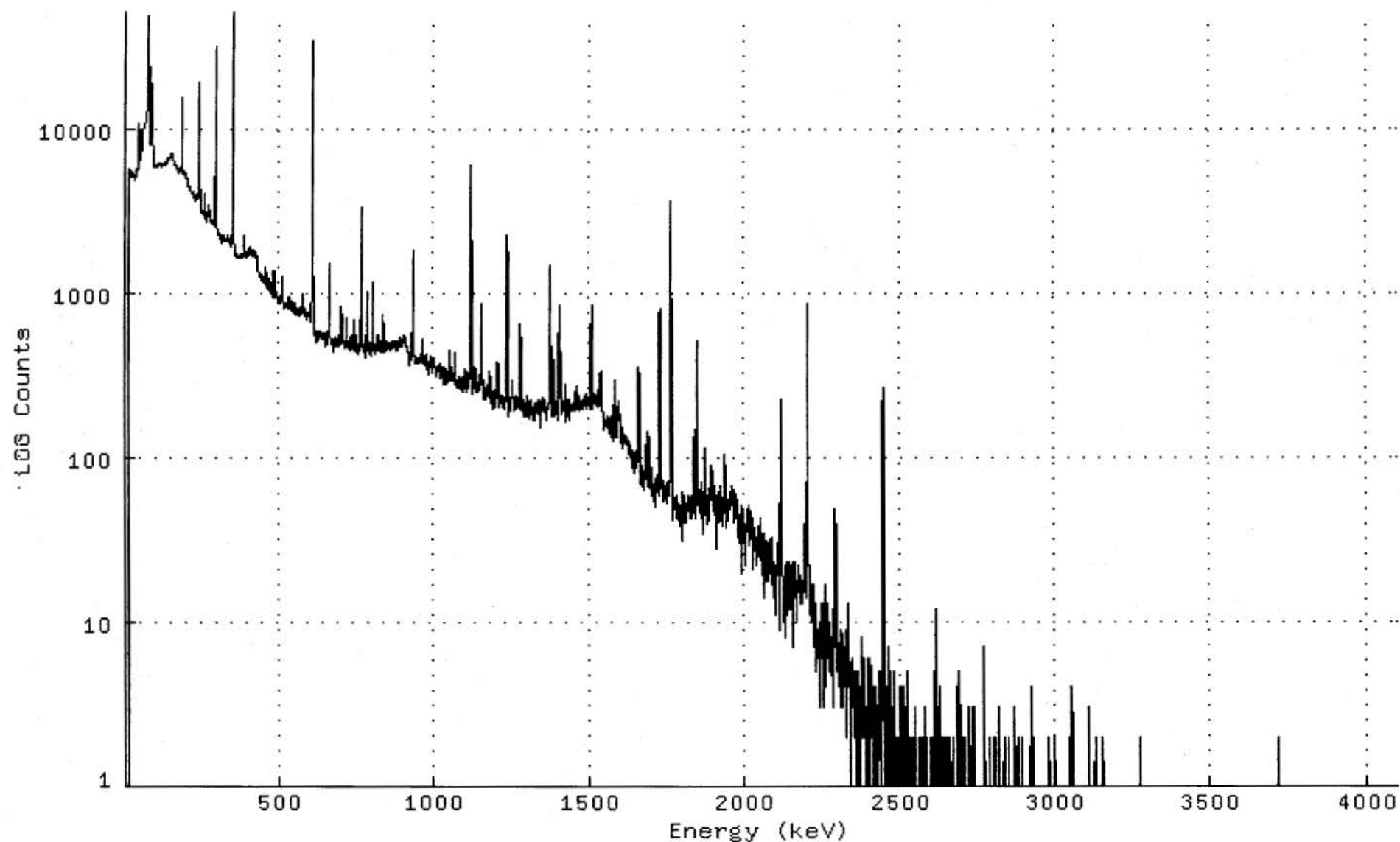
Grand Total Activity : 6.014E+03 6.045E+03

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit



Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916703\_GE4\_GAS1102\_169775.CNF;1  
Title :  
Sample Title: AR-01-31-110928  
Start Time: 25-OCT-2011 06:43 Sample Time: 28-SEP-2011 00:00 Energy Offset: 6.14527E-01  
Real Time : 0 01:01:44.05 Sample ID : 1109167-03 Energy Slope : 9.99512E-01  
Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00



## Channel Contents for DKA100:[GAMMA.SCUSR.ARCHIVE] SMP\_110916703\_GE4\_GAS1102\_1697

## Channel

1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	1	259	4972	5688
17:	5507	5382	5277	5105	5105	5093	5300	5143
25:	5084	5161	5225	4994	4832	5066	5232	5170
33:	5188	5045	5259	5031	5082	5308	5447	5599
41:	5616	5860	5920	6682	9568	10618	7483	6367
49:	6881	6939	7567	9810	9335	7409	7241	7548
57:	7775	8800	9640	9977	10180	10455	10678	10417
65:	10250	11062	11237	11125	11031	11209	11655	13046
73:	22831	34372	33824	47995	36993	15125	10970	8996
81:	8005	8152	9375	8768	11035	18537	16844	10881
89:	11127	8797	6993	6912	6507	6583	5954	5808
97:	5900	5748	5754	5755	5770	5720	5760	5774
105:	5766	5928	5893	6083	5987	5989	6045	6073
113:	6084	5996	5924	6135	5955	5986	5798	5998
121:	5941	5932	6015	6026	6140	6151	6152	6136
129:	5998	6206	6114	6035	6170	6327	6116	6259
137:	6262	6325	6526	6521	6489	6414	6595	6456
145:	6455	6548	6609	6737	6783	6864	6717	6870
153:	6980	6787	6539	6472	6358	6302	6099	6106
161:	6205	6021	5893	5912	5763	5631	5631	5602
169:	5660	5629	5616	5525	5498	5286	5582	5433
177:	5429	5500	5554	5443	5752	5639	5740	8402
185:	15466	14773	7511	5402	5429	5426	5354	5203
193:	5219	5200	5242	5326	5178	5002	5007	4980
201:	4938	4894	4689	4638	4493	4415	4349	4302
209:	4204	4381	4306	4223	4146	4021	4013	4121
217:	3977	4119	4094	4007	3885	3902	3862	3816
225:	3890	3762	3694	3815	3852	3551	3843	3728
233:	3684	3683	4024	3754	3781	3826	3969	8587
241:	18876	14948	5304	3341	3232	3106	3101	3213
249:	3129	3136	3083	3109	2947	3032	3092	3142
257:	3439	3992	3611	3085	2829	2784	2877	2793
265:	2760	2702	2855	2960	3125	3088	2941	2905
273:	3349	3382	2989	2756	2725	2681	2825	2808
281:	2679	2713	2746	2715	2585	2683	2647	2585
289:	2564	2584	2637	2843	9092	29786	31407	10148
297:	2831	2456	2378	2368	2243	2288	2290	2290
305:	2256	2211	2096	2292	2155	2184	2123	2194
313:	2175	2184	2213	2150	2005	2158	2150	2085
321:	2119	2128	2216	2057	2068	2068	2074	2111
329:	2129	2174	2084	2238	2146	2108	2099	2094
337:	2120	2107	2094	2062	1991	2020	1976	1921
345:	2060	2043	2225	2243	3786	20291	51670	39570
353:	8964	2049	1851	1682	1741	1676	1695	1672
361:	1708	1629	1652	1621	1642	1611	1654	1668
369:	1657	1639	1611	1667	1628	1626	1692	1695
377:	1684	1663	1630	1624	1631	1654	1629	1667
385:	1763	1972	2095	2211	2007	1654	1692	1740
393:	1703	1659	1631	1697	1648	1653	1689	1658
401:	1793	1796	1810	1895	1897	1852	1725	1740
409:	1853	1794	1791	1677	1746	1754	1695	1731
417:	1741	1739	1665	1825	1753	1719	1689	1770
425:	1710	1634	1664	1658	1447	1439	1414	1398

433:	1368	1315	1322	1271	1292	1333	1247	1248
441:	1234	1255	1217	1188	1269	1252	1200	1175
449:	1151	1153	1197	1240	1257	1436	1352	1201
457:	1136	1131	1165	1198	1319	1314	1129	1074
465:	1043	1102	1065	1166	1227	1183	1069	1044
473:	1059	1157	1055	987	1054	939	1185	1368
481:	1193	1011	976	978	1108	1298	1354	1066
489:	936	1001	928	924	974	963	980	921
497:	871	910	931	901	901	898	852	870
505:	872	853	887	1024	1087	1239	1155	1005
513:	897	844	796	788	822	805	807	815
521:	870	855	873	831	855	809	825	849
529:	816	796	871	929	926	863	818	875
537:	834	805	783	835	848	854	895	888
545:	858	792	799	816	749	766	822	772
553:	760	853	770	737	728	764	765	776
561:	756	791	768	806	770	772	726	733
569:	783	736	813	809	821	739	778	777
577:	748	794	961	974	804	788	726	741
585:	744	727	725	761	697	724	729	675
593:	681	717	717	731	712	758	716	720
601:	664	687	673	737	756	997	5726	24985
609:	33929	15247	2417	646	544	581	652	601
617:	575	561	548	582	501	515	506	558
625:	552	520	540	586	508	540	565	576
633:	582	588	559	532	525	549	562	544
641:	519	525	561	533	548	518	571	553
649:	571	465	504	522	506	475	487	537
657:	507	509	519	575	596	570	643	1047
665:	1508	1061	540	519	504	504	485	518
673:	480	487	475	514	435	516	464	489
681:	498	502	537	533	474	513	499	520
689:	504	465	502	474	468	465	484	513
697:	548	544	496	484	544	726	809	658
705:	517	494	502	537	545	533	492	456
713:	460	500	479	471	496	590	670	704
721:	560	465	508	496	454	507	487	459
729:	510	478	457	443	538	511	473	458
737:	480	475	473	491	622	679	583	533
745:	472	443	513	435	436	430	449	553
753:	502	457	465	453	424	474	460	464
761:	448	491	475	498	556	856	2335	3311
769:	2022	716	481	441	476	483	442	437
777:	436	470	448	405	452	440	459	678
785:	1014	994	642	499	444	491	445	426
793:	444	455	421	454	497	473	497	480
801:	465	411	462	573	954	1143	755	493
809:	468	423	474	469	467	468	492	451
817:	464	455	466	547	552	481	446	485
825:	513	535	488	466	438	430	484	492
833:	458	463	438	475	512	701	743	581
841:	507	437	455	470	454	476	473	451
849:	492	487	508	483	477	461	482	477
857:	472	451	496	457	496	495	478	488
865:	505	494	458	472	458	473	483	467
873:	476	513	472	501	462	487	507	451
881:	474	515	476	500	498	443	501	504
889:	526	473	487	535	507	542	502	474
897:	529	514	522	510	495	515	556	555
905:	512	493	515	543	486	532	476	515

913:	429	434	450	472	444	468	417	418
921:	439	417	418	359	436	462	412	431
929:	395	415	443	719	1510	1786	1065	480
937:	409	391	402	394	366	387	410	383
945:	397	404	402	368	399	394	372	370
953:	394	397	400	405	424	396	379	404
961:	400	437	498	524	470	369	373	386
969:	416	384	378	368	363	385	426	367
977:	379	358	345	362	384	335	354	317
985:	349	373	347	379	362	407	359	350
993:	379	346	368	331	377	389	353	367
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1017:	359	354	365	368	330	326	297	333
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1041:	278	288	307	300	332	331	287	343
1049:	296	322	394	441	372	330	307	324
1057:	309	295	291	314	291	328	302	317
1065:	291	313	277	296	376	436	335	286
1073:	281	266	287	289	283	289	286	307
1081:	279	286	281	264	281	301	298	257
1089:	283	278	264	281	248	299	301	305
1097:	289	307	272	266	274	298	342	326
1105:	327	260	249	274	288	265	288	288
1113:	285	323	313	298	393	1021	3582	5859
1121:	3882	1122	354	250	297	288	241	270
1129:	279	270	282	306	355	344	294	271
1137:	260	250	272	261	283	271	258	256
1145:	273	247	260	263	275	283	280	259
1153:	389	630	870	649	368	275	293	253
1161:	238	248	269	223	241	246	262	233
1169:	226	236	239	274	278	243	250	267
1177:	266	236	232	245	333	329	296	286
1185:	253	243	220	215	225	245	249	247
1193:	240	247	199	217	241	240	203	208
1201:	253	255	232	232	231	263	382	367
1209:	291	234	241	204	232	222	225	211
1217:	233	239	215	235	239	215	218	235
1225:	200	207	229	225	233	196	222	245
1233:	221	230	218	578	1534	2221	1397	484
1241:	239	199	224	177	206	189	210	205
1249:	209	217	245	239	293	287	229	244
1257:	217	202	203	191	223	203	235	213
1265:	202	208	195	223	219	213	221	219
1273:	232	204	222	199	209	221	287	588
1281:	649	449	264	213	225	192	205	202
1289:	226	176	208	190	184	177	211	198
1297:	199	182	178	209	179	210	234	214
1305:	228	214	210	214	174	189	191	183
1313:	208	196	211	199	222	169	194	194
1321:	198	192	200	197	198	213	168	183
1329:	209	214	188	196	198	189	215	195
1337:	224	202	197	186	183	208	174	198
1345:	179	150	185	207	233	215	196	193
1353:	189	204	226	223	191	206	188	195
1361:	199	203	166	190	174	192	181	206
1369:	199	213	196	204	197	227	261	679
1377:	1457	1433	747	296	176	204	226	354
1385:	409	377	274	192	185	177	185	187

1393:	185	186	216	199	187	168	223	372
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1409:	657	287	182	197	182	239	204	218
1417:	190	218	208	201	192	196	185	204
1425:	275	235	225	164	193	189	214	204
1433:	222	177	219	195	192	182	170	227
1441:	190	199	195	198	196	200	212	192
1449:	192	201	189	193	205	194	203	189
1457:	207	198	231	268	273	256	206	195
1465:	228	202	202	237	193	238	200	216
1473:	215	196	215	215	205	222	220	201
1481:	207	225	198	206	216	216	234	221
1489:	222	196	211	243	227	219	226	208
1497:	229	218	215	225	228	213	203	238
1505:	197	213	308	500	840	670	362	225
1513:	239	198	238	210	241	210	211	218
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1537:	230	319	337	235	214	236	280	278
1545:	197	184	147	186	153	177	173	161
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1561:	154	159	153	160	163	171	139	152
1569:	152	157	175	140	148	131	141	145
1577:	127	158	147	151	160	267	294	284
1585:	206	160	144	132	137	139	132	156
1593:	168	197	207	214	166	177	203	221
1601:	154	140	123	147	148	138	138	149
1609:	143	112	144	123	129	128	124	121
1617:	132	136	126	120	131	129	120	123
1625:	127	103	115	105	117	114	125	112
1633:	101	105	109	106	107	87	107	94
1641:	98	110	86	108	96	92	80	93
1649:	88	109	104	86	95	88	86	103
1657:	98	93	121	216	348	308	163	84
1665:	68	81	81	78	90	71	84	85
1673:	67	64	74	69	83	73	68	63
1681:	82	94	110	118	102	79	67	91
1689:	75	69	98	144	125	118	102	92
1697:	64	74	58	87	69	69	84	71
1705:	68	66	58	54	54	63	50	69
1713:	60	60	71	70	77	62	67	68
1721:	65	67	73	58	67	74	109	289
1729:	732	802	438	162	89	65	67	72
1737:	64	54	65	71	62	55	65	67
1745:	64	61	61	63	65	71	53	63
1753:	63	66	65	64	60	58	72	71
1761:	96	340	1432	3395	3591	1849	445	79
1769:	57	41	51	56	51	51	53	53
1777:	48	57	47	58	56	52	51	43
1785:	48	45	53	47	41	52	51	41
1793:	38	51	48	44	61	44	31	44
1801:	40	51	46	47	40	53	43	59
1809:	57	47	40	40	53	47	45	48
1817:	55	51	48	57	59	44	52	45
1825:	49	43	55	59	47	56	52	46
1833:	43	48	60	61	89	100	134	83
1841:	75	43	54	46	91	246	463	510
1849:	278	102	63	51	63	49	51	54
1857:	48	46	55	50	48	70	42	67
1865:	44	49	48	57	62	34	56	77

1873:	112	102	60	63	39	47	47	45
1881:	52	54	64	61	51	41	53	48
1889:	70	68	75	60	55	60	88	75
1897:	82	72	51	53	47	48	67	51
1905:	45	47	45	59	54	32	53	38
1913:	28	58	52	40	61	54	50	56
1921:	45	50	47	67	41	54	52	44
1929:	38	53	50	65	62	46	72	86
1937:	103	75	62	69	53	48	37	53
1945:	41	55	56	53	55	41	58	61
1953:	49	61	53	48	55	53	52	51
1961:	66	54	52	55	52	63	41	40
1969:	48	44	60	43	52	48	43	33
1977:	34	44	56	38	41	33	30	42
1985:	45	33	42	38	44	40	30	20
1993:	51	33	30	37	37	47	44	36
2001:	26	26	29	22	37	40	43	35
2009:	49	43	39	51	29	40	31	44
2017:	32	32	42	42	40	44	47	37
2025:	36	42	25	21	41	30	31	34
2033:	28	27	37	34	31	27	26	29
2041:	22	31	29	38	29	30	36	25
2049:	24	28	25	40	39	43	28	29
2057:	25	34	24	26	14	24	25	34
2065:	18	27	31	29	26	29	21	19
2073:	18	30	20	19	22	18	18	25
2081:	29	29	32	20	23	21	17	25
2089:	33	32	23	16	22	23	21	16
2097:	14	17	11	22	13	22	17	26
2105:	19	19	26	28	26	36	34	28
2113:	24	9	20	29	96	226	225	176
2121:	70	20	18	14	11	13	18	10
2129:	20	8	22	9	12	22	17	17
2137:	17	11	23	17	12	17	15	21
2145:	23	18	21	22	17	21	21	12
2153:	16	15	17	17	23	7	18	23
2161:	19	20	21	14	15	13	16	16
2169:	15	10	18	15	17	22	19	19
2177:	20	16	13	19	18	14	17	18
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2201:	40	121	475	859	860	448	99	26
2209:	18	15	15	22	11	12	12	10
2217:	13	15	17	12	10	10	12	17
2225:	11	8	6	11	11	13	9	5
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2241:	9	3	7	5	8	6	6	7
2249:	7	13	9	6	13	3	11	6
2257:	11	4	8	12	17	11	9	11
2265:	13	7	7	8	7	5	10	9
2273:	10	5	5	5	7	8	6	6
2281:	7	3	9	6	12	12	10	7
2289:	10	9	18	29	48	44	36	18
2297:	5	10	8	8	7	6	4	7
2305:	5	7	6	4	7	5	3	9
2313:	8	7	7	4	4	3	7	7
2321:	4	4	4	6	6	5	9	7
2329:	2	6	9	13	7	9	4	6
2337:	8	4	1	5	3	4	3	3
2345:	3	3	6	6	4	5	2	2

2353:	3	3	3	3	5	3	1	4
2361:	4	5	2	3	2	0	4	1
2369:	4	4	2	1	1	7	7	4
2377:	8	6	6	2	2	6	4	4
2385:	2	2	3	1	3	2	1	3
2393:	2	1	2	1	4	6	3	1
2401:	0	2	2	6	5	3	4	2
2409:	2	3	2	4	3	2	2	1
2417:	2	1	4	1	0	0	3	2
2425:	3	1	1	3	2	5	5	2
2433:	3	4	2	0	5	1	1	2
2441:	2	3	8	7	18	64	186	265
2449:	238	95	23	3	0	4	4	2
2457:	1	4	4	2	1	2	1	3
2465:	7	1	5	3	0	1	2	1
2473:	3	1	0	0	1	0	0	1
2481:	1	5	1	3	1	2	0	1
2489:	1	0	2	2	0	2	1	1
2497:	4	1	2	0	2	0	2	1
2505:	1	3	3	4	4	0	0	3
2513:	0	1	3	0	0	2	0	3
2521:	0	2	2	2	5	0	2	0
2529:	1	0	2	0	1	1	0	1
2537:	2	1	1	1	0	2	2	2
2545:	2	2	0	1	1	3	0	1
2553:	1	1	1	1	0	0	0	2
2561:	2	1	2	0	0	1	2	2
2569:	0	2	0	0	1	2	1	0
2577:	0	3	0	0	0	2	0	0
2585:	1	2	2	0	0	1	1	1
2593:	0	0	1	0	1	1	0	2
2601:	2	1	0	0	2	0	0	2
2609:	0	0	0	5	0	5	12	6
2617:	5	2	0	1	1	1	3	0
2625:	1	0	1	1	1	0	4	1
2633:	1	0	1	0	2	2	1	1
2641:	0	0	2	1	0	0	0	2
2649:	0	1	1	0	1	2	1	1
2657:	1	1	1	1	1	2	1	1
2665:	0	0	1	0	0	1	2	1
2673:	0	1	0	0	0	1	0	0
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2689:	0	1	3	1	5	2	3	3
2697:	1	0	0	0	0	1	2	1
2705:	1	2	0	0	2	0	0	1
2713:	0	0	0	1	0	0	3	0
2721:	1	2	0	1	1	0	1	1
2729:	1	3	1	0	0	1	1	3
2737:	3	1	1	0	0	0	1	0
2745:	1	1	0	0	1	1	0	0
2753:	0	0	0	0	1	0	0	0
2761:	0	0	0	0	1	0	0	0
2769:	2	7	4	2	0	0	1	0
2777:	1	0	1	0	0	0	1	1
2785:	1	1	2	1	1	0	0	1
2793:	0	0	1	0	0	0	0	0
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2897:	0	0	0	0	1	1	0	0
2905:	0	0	1	0	0	0	1	0
2913:	1	0	1	0	0	1	0	0
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2929:	0	0	0	1	0	0	0	0
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2945:	0	0	1	0	0	1	1	0
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2961:	0	0	0	0	0	0	0	1
2969:	0	1	0	0	0	0	0	0
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2985:	0	0	0	0	0	0	0	0
2993:	0	0	0	0	0	1	0	2
3001:	0	1	0	0	0	0	0	0
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3017:	1	0	0	1	0	0	1	0
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3033:	1	0	0	0	0	0	0	0
3041:	0	0	0	0	0	0	2	0
3049:	0	2	0	0	2	0	4	2
3057:	2	0	0	0	0	0	0	0
3065:	1	1	0	0	0	0	0	0
3073:	1	0	0	0	0	1	0	0
3081:	1	1	0	0	1	0	1	0
3089:	0	0	0	0	0	0	1	0
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3105:	0	0	3	0	0	0	0	0
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3121:	0	0	0	0	0	0	0	1
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3145:	1	0	0	0	1	0	1	1
3153:	2	0	0	0	0	0	0	0
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3169:	1	0	0	0	0	0	0	0
3177:	0	0	0	0	0	0	0	0
3185:	1	0	0	0	0	0	0	0
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3217:	0	0	0	0	0	0	0	0
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3337:	0	0	0	0	0	0	0	0
3345:	0	0	0	0	0	0	0	0
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3377:	0	1	0	0	0	0	0	0
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3393:	0	0	0	1	0	0	0	0
3401:	0	0	0	1	0	0	0	0
3409:	0	0	0	0	0	0	0	0
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3481:	0	0	0	0	0	0	0	0
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3697:	0	0	1	0	0	0	0	0
3705:	0	0	0	0	1	0	1	0
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3809:	1	0	0	0	0	0	0	0
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3825:	0	0	0	1	0	0	0	0
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3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	0	1	0	0	0
3881:	0	0	0	0	0	0	1	0
3889:	1	0	0	0	0	0	0	0
3897:	0	0	0	0	0	1	0	0
3905:	0	0	0	0	0	0	0	0
3913:	0	0	0	1	0	0	1	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	0	0	0	0	1
3937:	1	0	0	0	0	0	0	0
3945:	0	1	0	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	1
3969:	0	0	0	0	0	0	1	0
3977:	0	0	1	0	0	0	0	0
3985:	1	0	1	1	0	0	0	0
3993:	0	0	1	0	0	0	0	0
4001:	0	0	0	1	0	0	0	0
4009:	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	0	0	0	0
4033:	0	0	0	0	0	0	0	0
4041:	0	0	0	0	0	0	0	1
4049:	0	0	0	0	0	0	0	0
4057:	0	1	0	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	1	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0

Sample ID : 1109167-04

Page : 1  
Acquisition date : 25-OCT-2011 07:48:33

VAX/VMS Peak Search Report Generated 25-OCT-2011 08:50:54.34

Configuration : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916704\_GE4\_GAS1102\_169781.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : AR-01-31-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 07:48:33  
 Sample ID : 1109167-04 Sample Quantity : 4.22940E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE4 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:01:44.36 2.8%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	46.13*	8370	38200	2.06	45.54	43	6	7.7		PB-210
0	52.81*	5807	42911	2.05	52.22	50	6	11.6		
7	69.16	14977	91999	3.90	68.58	56	26	9.0	6.08E+02	
7	76.05*	154744	95323	3.92	75.47	56	26	0.9		AM-243
1	83.48*	2709	8065	1.82	82.91	82	11	7.4	1.43E+02	
1	86.77	24422	45525	1.94	86.20	82	11	3.1		NP-237 SN-126 CD-109
1	89.37	10352	50574	2.23	88.80	82	11	8.1		
0	111.36	816	42020	3.94	110.80	108	7	83.6		
10	142.31*	2389	75451	5.20	141.76	136	22	46.2	3.59E+00	
10	152.02	3648	88407	5.39	151.48	136	22	34.8		
0	185.97*	25307	54523	2.19	185.45	181	10	3.7		RA-226
0	196.20	812	35495	2.70	195.68	193	7	77.3		
0	202.68	729	27737	3.59	202.17	200	6	72.8		
0	241.78	34029	34480	2.10	241.29	237	10	2.3		RA-224
0	258.43	2432	23594	2.24	257.94	255	8	22.3		
1	266.27	373	14070	2.36	265.78	263	14	95.4	4.35E+00	
1	269.70	1185	19419	2.37	269.22	263	14	39.6		CS-135
1	274.27	1842	19129	2.37	273.78	263	14	25.6		
0	295.00	71676	24549	2.21	294.53	290	10	1.1		PB-214
0	351.69*	114608	20560	2.16	351.25	346	11	0.8		PB-214
0	387.80	1571	16897	3.51	387.37	383	10	31.4		
0	405.46	463	12330	2.21	405.04	402	7	80.1		PB-211
0	428.43	266	9107	1.52	428.02	426		6114.7		
0	454.99	678	8130	1.82	454.60	451	7	44.8		
0	461.25	487	6748	2.56	460.86	459	6	54.1		
0	469.18	271	6488	1.61	468.80	467	6	94.8		
0	480.28	525	6161	1.44	479.90	478	6	48.1		
0	486.99	839	6826	2.14	486.61	484	7	33.4		
0	510.60*	1242	7754	3.83	510.24	506	9	26.3		
0	533.38	414	5784	2.74	533.03	530	7	61.6		
0	544.29	346	5451	2.15	543.94	541	7	71.6		
0	580.28	722	5959	2.62	579.95	576	8	37.8		
0	609.07*	79591	7740	2.26	608.76	602	12	0.8		BI-214
0	646.20	176	3033	2.65	645.90	644		6100.2		

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It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
2	660.83	204	2034	2.03	660.54	658	15	63.7	1.75E+00	CS-137
2	665.26	2403	3484	2.29	664.97	658	15	9.1		
0	703.13	537	4394	1.96	702.86	699	8	43.6		
0	719.18	522	3844	2.48	718.91	715	8	42.1		
0	732.63	204	3198	3.99	732.37	729	7	93.1		
0	742.60	452	4252	2.65	742.35	738	9	52.9		
0	753.07	210	3174	2.63	752.82	750	7	90.0		
0	768.09	7157	5004	2.23	767.85	763	11	4.5		
0	785.75	1500	4545	2.32	785.52	781	10	17.6		
0	806.30	1496	5157	2.43	806.08	799	11	19.3		
0	820.56	236	2759	2.55	820.35	818	6	71.5		
0	825.83	151	2841	2.84	825.62	824		6112.8		
0	832.11	165	2260	2.36	831.90	830	5	87.9		PB-211
0	838.58	850	3574	2.34	838.38	835	8	25.3		
0	904.03	290	3884	2.43	903.86	900	8	75.2		
0	933.63	3933	4791	2.38	933.47	927	12	7.7		
0	941.48	171	2719	2.16	941.32	939		7102.6		
0	963.65	485	2992	2.03	963.50	960	8	40.1		
0	1052.08	307	2019	3.13	1051.98	1049	7	49.9		
0	1069.31	341	2018	2.47	1069.22	1066	7	45.1		
0	1103.85	208	1982	2.19	1103.78	1101	7	72.3		
0	1120.08	14452	2896	2.52	1120.01	1114	11	2.2		BI-214
3	1129.73	130	761	1.80	1129.67	1128	10	57.8	4.38E+00	
3	1133.72	358	2027	2.59	1133.66	1128	10	45.0		
0	1155.11	1630	2950	2.57	1155.06	1150	11	13.9		
0	1172.08	129	1703	2.79	1172.04	1169		7108.0		
0	1181.92	273	2225	1.89	1181.88	1178	9	63.6		
0	1206.97	631	2129	2.88	1206.95	1202	10	28.5		
0	1237.94	5283	2257	2.65	1237.93	1233	11	4.4		
0	1253.36	334	1915	3.11	1253.36	1249	9	48.6		
0	1281.14	1367	2276	2.75	1281.15	1276	11	14.6		
0	1316.61	105	1330	3.51	1316.64	1314		7117.1		
0	1377.45	3398	2158	2.53	1377.51	1372	11	6.3		
0	1385.27	653	1404	2.80	1385.33	1383	7	20.6		
3	1401.30	1205	1363	2.50	1401.37	1397	17	11.7	1.42E+00	
3	1407.77	1962	1389	2.48	1407.84	1397	17	7.8		
0	1425.76	120	1359	1.87	1425.84	1423		7104.0		
0	1452.97	78	970	1.93	1453.06	1451		5122.3		
0	1460.11*	213	1879	2.21	1460.21	1457	9	74.5		K-40
0	1508.89	1689	2252	2.49	1509.01	1504	10	11.6		
2	1538.40	466	1657	3.10	1538.54	1533	15	32.9	7.08E-01	
2	1543.33	369	1511	3.11	1543.47	1533	15	41.3		
0	1582.81	587	1247	2.56	1582.97	1579	9	23.2		
2	1594.20	258	1202	3.12	1594.36	1590	14	50.4	2.13E+00	
2	1599.31	291	1040	2.62	1599.48	1590	14	40.4		
1	1651.07	76	767	2.85	1651.26	1647	21	127.8	3.18E+00	
1	1661.05	871	666	2.85	1661.25	1647	21	12.9		
0	1683.67	230	834	3.35	1683.88	1677	12	51.9		
0	1693.11	229	744	2.74	1693.32	1689	10	46.5		
0	1729.39	2254	870	2.95	1729.62	1722	14	7.0		
0	1764.33*	11026	738	2.71	1764.58	1758	15	2.2		BI-214

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	1837.48	138	567	2.60	1837.76	1835	10	66.5		
0	1847.28*	1395	443	2.98	1847.57	1844	9	7.6		
0	1872.00	143	499	2.69	1872.30	1867	10	60.9		
0	1896.31	128	369	3.20	1896.62	1893	8	55.2		
0	1988.70	67	237	5.60	1989.06	1986	8	83.1		
0	2052.20	55	238	4.62	2052.59	2049		9104.5		
0	2118.59	706	303	2.51	2119.01	2112	13	12.6		
0	2203.97*	2792	162	2.87	2204.44	2199	13	4.2		BI-214
0	2236.14	39	85	1.26	2236.62	2230		14105.0		
0	2293.64	172	75	3.10	2294.15	2288	12	24.8		
0	2331.93	31	36	5.02	2332.45	2327	12	85.3		
0	2349.47	28	32	9.00	2350.00	2342	16	97.9		
0	2429.06	15	9	3.78	2429.63	2425	10	93.1		
0	2437.06	12	6	1.41	2437.64	2434	8	92.1		
0	2447.60	794	16	2.78	2448.18	2442	13	7.4		
0	2506.63	13	5	1.84	2507.24	2503	8	84.8		
0	2543.36	16	3	6.69	2543.99	2539	11	64.3		
0	2614.42	61	0	3.86	2615.08	2608	13	25.6		
0	2627.49	5	2	1.80	2628.16	2623		7125.1		
0	2695.90	15	3	4.90	2696.61	2691	11	66.1		
0	2769.70	10	6	1.35	2770.44	2766		11106.9		
0	2895.73	6	2	3.00	2896.53	2892		8113.1		
0	2978.41	8	0	2.74	2979.25	2975	8	70.7		
0	3054.21	11	0	1.94	3055.09	3052	7	60.3		

Total number of lines in spectrum 109  
Number of unidentified lines 70  
Number of lines tentatively identified by NID 39 35.78%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.973E+01	1.973E+01	1.483E+01	75.18	
PB-210	22.26Y	1.00	2.607E+02	2.613E+02	0.314E+02	12.02	
PB-211	3.28E+04Y	1.00	3.909E+01	3.909E+01	2.368E+01	60.58	
BI-214	1602.00Y	1.00	7.520E+02	7.520E+02	0.413E+02	5.50	
PB-214	1602.00Y	1.00	7.843E+02	7.843E+02	0.634E+02	8.08	
RA-224	1.41E+10Y	1.00	1.524E+03	1.524E+03	0.157E+03	10.34	
RA-226	1602.00Y	1.00	1.114E+03	1.114E+03	2.042E+03	183.22	
Total Activity :			4.494E+03	4.495E+03			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	6.885E+02	7.172E+02	0.917E+02	12.78	
SN-126	1.00E+05Y	1.00	6.919E+01	6.919E+01	0.780E+01	11.28	
CS-137	30.17Y	1.00	1.146E+00	1.148E+00	0.741E+00	64.53	
NP-237	2.14E+06Y	1.00	2.030E+02	2.030E+02	0.227E+02	11.16	
Total Activity :			9.618E+02	9.905E+02			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-135	2.30E+06Y	1.00	1.439E+01	1.439E+01	0.589E+01	40.91	
AM-243	7380.00Y	1.00	2.460E+02	2.460E+02	0.235E+02	9.56	
Total Activity :			2.604E+02	2.604E+02			

Grand Total Activity : 5.716E+03 5.746E+03

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
K-40	1460.81	10.67*	1.798E-01	1.973E+01	1.973E+01	75.18	OK
Final Mean for 1 Valid Peaks = 1.973E+01+/- 1.483E+01 ( 75.18%)							
PB-210	46.50	4.05*	1.407E+00	2.607E+02	2.613E+02	12.02	OK
Final Mean for 1 Valid Peaks = 2.613E+02+/- 3.141E+01 ( 12.02%)							
PB-211	404.84	2.90*	6.142E-01	4.617E+01	4.617E+01	81.23	OK
	831.96	2.90	2.942E-01	3.439E+01	3.439E+01	88.80	OK
Final Mean for 2 Valid Peaks = 3.909E+01+/- 2.368E+01 ( 60.58%)							
BI-214	609.31	46.30*	4.029E-01	7.573E+02	7.573E+02	11.57	OK
	1120.29	15.10	2.230E-01	7.619E+02	7.619E+02	12.03	OK
	1764.49	15.80	1.582E-01	7.832E+02	7.833E+02	9.78	OK
	2204.22	4.98	1.404E-01	7.086E+02	7.087E+02	10.96	OK
Final Mean for 4 Valid Peaks = 7.520E+02+/- 4.133E+01 ( 5.50%)							
PB-214	295.21	19.19	8.368E-01	7.923E+02	7.923E+02	10.67	OK
	351.92	37.19*	7.067E-01	7.741E+02	7.741E+02	12.36	OK
Final Mean for 2 Valid Peaks = 7.843E+02+/- 6.335E+01 ( 8.08%)							
RA-224	240.98	3.95*	1.004E+00	1.524E+03	1.524E+03	10.34	OK
Final Mean for 1 Valid Peaks = 1.524E+03+/- 1.575E+02 ( 10.34%)							
RA-226	186.21	3.28*	1.229E+00	1.114E+03	1.114E+03	183.22	OK
Final Mean for 1 Valid Peaks = 1.114E+03+/- 2.042E+03 (183.22%)							

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CD-109	88.03	3.72*	1.693E+00	6.885E+02	7.172E+02	12.78	OK
Final Mean for 1 Valid Peaks = 7.172E+02+/- 9.165E+01 ( 12.78%)							
SN-126	87.57	37.00*	1.693E+00	6.919E+01	6.919E+01	11.28	OK
Final Mean for 1 Valid Peaks = 6.919E+01+/- 7.803E+00 ( 11.28%)							
CS-137	661.65	85.12*	3.702E-01	1.146E+00	1.148E+00	64.53	OK
Final Mean for 1 Valid Peaks = 1.148E+00+/- 7.411E-01 ( 64.53%)							

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
NP-237	86.50	12.60*	1.695E+00	2.030E+02	2.030E+02	11.16	OK

Final Mean for 1 Valid Peaks = 2.030E+02+/- 2.266E+01 ( 11.16%)

Nuclide Type: ACTIVATION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CS-135	268.24	16.00*	9.137E-01	1.439E+01	1.439E+01	40.91	OK

Final Mean for 1 Valid Peaks = 1.439E+01+/- 5.886E+00 ( 40.91%)

AM-243	74.67	66.00*	1.692E+00	2.460E+02	2.460E+02	9.56	OK
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Final Mean for 1 Valid Peaks = 2.460E+02+/- 2.352E+01 ( 9.56%)

Flag: "\*" = Keyline



---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	1.973E+01	1.483E+01	1.709E+01	1.606E+00	1.155
CD-109	7.172E+02	9.165E+01	2.786E+01	3.269E+00	25.747
SN-126	6.919E+01	7.803E+00	2.687E+00	2.709E-01	25.750
CS-135	1.439E+01	5.886E+00	7.499E+00	6.993E-01	1.918
CS-137	1.148E+00	7.411E-01	1.575E+00	1.459E-01	0.729
PB-210	2.613E+02	3.141E+01	2.743E+01	2.284E+00	9.526
PB-211	3.909E+01	2.368E+01	5.007E+01	6.547E+00	0.781
BI-214	7.520E+02	4.133E+01	3.039E+00	3.290E-01	247.479
PB-214	7.843E+02	6.335E+01	3.494E+00	4.079E-01	224.458
RA-224	1.524E+03	1.575E+02	3.131E+01	2.894E+00	48.666
RA-226	1.114E+03	2.042E+03	3.798E+01	6.956E+01	29.340
NP-237	2.030E+02	2.266E+01	7.881E+00	7.843E-01	25.756
AM-243	2.460E+02	2.352E+01	1.597E+00	1.379E-01	154.044

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.881E+01		1.692E+01	1.911E+01	2.479E+00	0.984
NA-22	1.216E+00		1.148E+00	1.744E+00	1.681E-01	0.697
AL-26	-2.712E-01		6.082E-01	1.017E+00	8.671E-02	-0.267
TI-44	1.690E+01	+	2.138E+00	1.357E+00	1.083E-01	12.449
SC-46	7.208E-01		1.335E+00	2.282E+00	3.003E-01	0.316
V-48	-4.611E-01		3.358E+00	5.703E+00	7.261E-01	-0.081
CR-51	-1.221E+01		1.589E+01	2.545E+01	2.799E+00	-0.480
MN-54	3.278E+00		1.621E+00	1.821E+00	2.224E-01	1.800
CO-56	7.571E-01		1.416E+00	2.146E+00	2.664E-01	0.353
CO-57	-1.523E+00		8.000E-01	1.277E+00	1.177E-01	-1.193
CO-58	1.237E+00		1.501E+00	2.135E+00	2.521E-01	0.579
FE-59	2.122E+00		3.082E+00	4.659E+00	5.575E-01	0.455
CO-60	1.075E+00	+	1.167E+00	1.732E+00	1.784E-01	0.621
ZN-65	4.898E+01		6.577E+00	5.610E+00	6.287E-01	8.729
SE-75	6.447E-01		2.096E+00	2.388E+00	2.239E-01	0.270
RB-82	-3.859E+00		2.194E+01	2.405E+01	2.694E+00	-0.160
RB-83	1.733E+00		2.358E+00	3.593E+00	6.506E-01	0.482
KR-85	4.447E+02		2.261E+02	3.195E+02	4.038E+01	1.392
SR-85	2.592E+00		1.318E+00	1.862E+00	2.353E-01	1.392
Y-88	1.906E+00	+	1.280E+00	1.595E+00	1.347E-01	1.194
NB-93M	6.037E+02		2.504E+02	4.778E+01	1.962E+01	12.636
NB-94	1.123E+00		1.041E+00	1.776E+00	2.281E-01	0.632
NB-95	5.901E+01		7.279E+00	4.345E+00	4.788E-01	13.581
NB-95M	-4.863E+02		6.675E+02	9.592E+02	8.838E+01	-0.507
ZR-95	2.268E+00		2.785E+00	3.619E+00	4.186E-01	0.627
RU-103	3.764E-01		1.580E+00	2.415E+00	4.116E-01	0.156
RU-106	-8.861E+00		9.001E+00	1.406E+01	2.057E+00	-0.630
AG-108M	9.049E-01		1.267E+00	1.647E+00	1.693E-01	0.549
AG-110M	1.034E+00		1.099E+00	1.577E+00	1.479E-01	0.656
SN-113	3.005E+00		1.824E+00	2.586E+00	3.413E-01	1.162

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TE123M	3.678E+00		1.184E+00	1.673E+00	1.451E-01	2.198
SB-124	1.399E+00		1.427E+00	2.042E+00	2.245E-01	0.685
I-125	-2.814E+01		1.712E+01	2.768E+01	2.944E+00	-1.016
SB-125	2.830E+00	+	3.271E+00	5.169E+00	6.840E-01	0.548
SB-126	2.338E+01	+	1.017E+01	1.308E+01	1.339E+00	1.788
SB-127	3.243E+02		3.345E+02	5.379E+02	5.186E+01	0.603
I-129	-1.583E+00		1.727E+00	2.832E+00	3.753E-01	-0.559
I-131	-3.580E+00		1.026E+01	1.649E+01	1.994E+00	-0.217
BA-133	6.754E+01		1.095E+01	3.259E+00	5.043E-01	20.727
CS-134	6.313E+01		7.522E+00	2.934E+00	3.217E-01	21.515
CS-136	2.681E+00		5.934E+00	8.958E+00	1.098E+00	0.299
LA-138	3.855E-01		1.770E+00	2.783E+00	2.555E-01	0.139
CE-139	-9.658E-01		1.047E+00	1.695E+00	1.449E-01	-0.570
BA-140	2.031E+01		2.267E+01	2.452E+01	8.409E+00	0.828
LA-140	1.807E+01		5.531E+00	8.813E+00	7.957E-01	2.050
CE-141	1.160E+01		3.809E+00	4.322E+00	1.021E+00	2.684
CE-144	-4.046E+00		7.337E+00	1.067E+01	9.663E-01	-0.379
PM-144	1.377E+00		1.050E+00	1.507E+00	1.483E-01	0.914
PM-145	-7.483E+00		6.060E+00	5.866E+00	3.832E+00	-1.276
PM-146	5.563E+00	+	2.607E+00	3.535E+00	4.626E-01	1.574
ND-147	7.596E+01		4.170E+01	5.917E+01	7.346E+00	1.284
EU-152	1.266E+02	+	1.814E+01	1.785E+01	2.029E+00	7.091
GD-153	-5.567E+00		3.216E+00	4.597E+00	4.440E-01	-1.211
EU-154	3.330E+00		3.185E+00	4.837E+00	4.663E-01	0.688
EU-155	8.364E+01	+	9.336E+00	4.423E+00	4.402E-01	18.911
EU-156	-8.048E+00		4.161E+01	5.293E+01	1.282E+01	-0.152
HO-166M	-5.691E-01		2.422E+00	2.660E+00	2.684E-01	-0.214
HF-172	4.183E+00		5.803E+00	9.502E+00	8.700E-01	0.440
LU-172	2.232E+01		2.784E+01	4.613E+01	5.307E+00	0.484
LU-173	2.873E+01		5.160E+00	6.443E+00	6.009E-01	4.459
HF-175	-8.318E-01		1.460E+00	2.083E+00	2.372E-01	-0.399
LU-176	-8.573E-01		8.240E-01	1.316E+00	1.341E-01	-0.652
TA-182	3.893E+02	+	4.679E+01	1.603E+01	1.782E+00	24.290
IR-192	2.443E+00	+	2.339E+00	3.687E+00	4.804E-01	0.662
HG-203	2.348E+00		1.681E+00	2.427E+00	2.318E-01	0.967
BI-207	-1.225E-01		9.448E-01	1.435E+00	1.686E-01	-0.085
TL-208	6.659E+00		3.408E+00	4.839E+00	5.546E-01	1.376
BI-210M	5.029E+00		2.423E+00	2.757E+00	2.568E-01	1.824
BI-212	-6.353E-01		1.113E+01	1.228E+01	1.271E+00	-0.052
PB-212	7.064E+01		7.448E+00	3.756E+00	3.467E-01	18.810
RN-219	2.272E+01		1.592E+01	2.267E+01	2.962E+00	1.002
RA-223	-2.208E+00		2.033E+01	3.283E+01	3.529E+00	-0.067
RA-225	1.356E+01		9.434E+00	1.394E+01	1.312E+00	0.973
TH-227	-5.059E+00		7.616E+00	1.095E+01	1.009E+00	-0.462
AC-228	4.172E+00		4.354E+00	6.584E+00	8.721E-01	0.634
TH-230	4.311E+03	+	5.448E+02	3.457E+02	2.753E+01	12.468
PA-231	6.163E+01		3.777E+01	5.431E+01	5.465E+00	1.135
TH-231	-4.789E+00		8.373E+00	1.381E+01	2.300E+00	-0.347

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	2.164E+00		4.070E+00	6.552E+00	1.518E+00	0.330
PA-234	-8.408E-01		3.594E+00	5.244E+00	4.764E-01	-0.160
PA-234M	5.606E+01		1.106E+02	1.889E+02	2.375E+01	0.297
TH-234	4.728E+02		4.793E+01	3.328E+01	2.524E+00	14.207
U-235	2.795E+01	+	1.388E+01	1.101E+01	1.944E+00	2.538
AM-241	2.812E+01		3.576E+00	3.371E+00	2.459E-01	8.341
CM-243	1.433E+01		6.356E+00	9.085E+00	8.472E-01	1.577

Total number of lines in spectrum 109  
Number of unidentified lines 70  
Number of lines tentatively identified by NID 39 35.78%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.973E+01	1.973E+01	1.483E+01	75.18	
PB-210	22.26Y	1.00	2.607E+02	2.613E+02	0.314E+02	12.02	
PB-211	3.28E+04Y	1.00	3.909E+01	3.909E+01	2.368E+01	60.58	
BI-214	1602.00Y	1.00	7.520E+02	7.520E+02	0.413E+02	5.50	
PB-214	1602.00Y	1.00	7.843E+02	7.843E+02	0.634E+02	8.08	
RA-224	1.41E+10Y	1.00	1.524E+03	1.524E+03	0.157E+03	10.34	
RA-226	1602.00Y	1.00	1.114E+03	1.114E+03	2.042E+03	183.22	
Total Activity :			4.494E+03	4.495E+03			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	6.885E+02	7.172E+02	0.917E+02	12.78	
SN-126	1.00E+05Y	1.00	6.919E+01	6.919E+01	0.780E+01	11.28	
CS-137	30.17Y	1.00	1.146E+00	1.148E+00	0.741E+00	64.53	
NP-237	2.14E+06Y	1.00	2.030E+02	2.030E+02	0.227E+02	11.16	
Total Activity :			9.618E+02	9.905E+02			

Nuclide Type : ACTIVATION

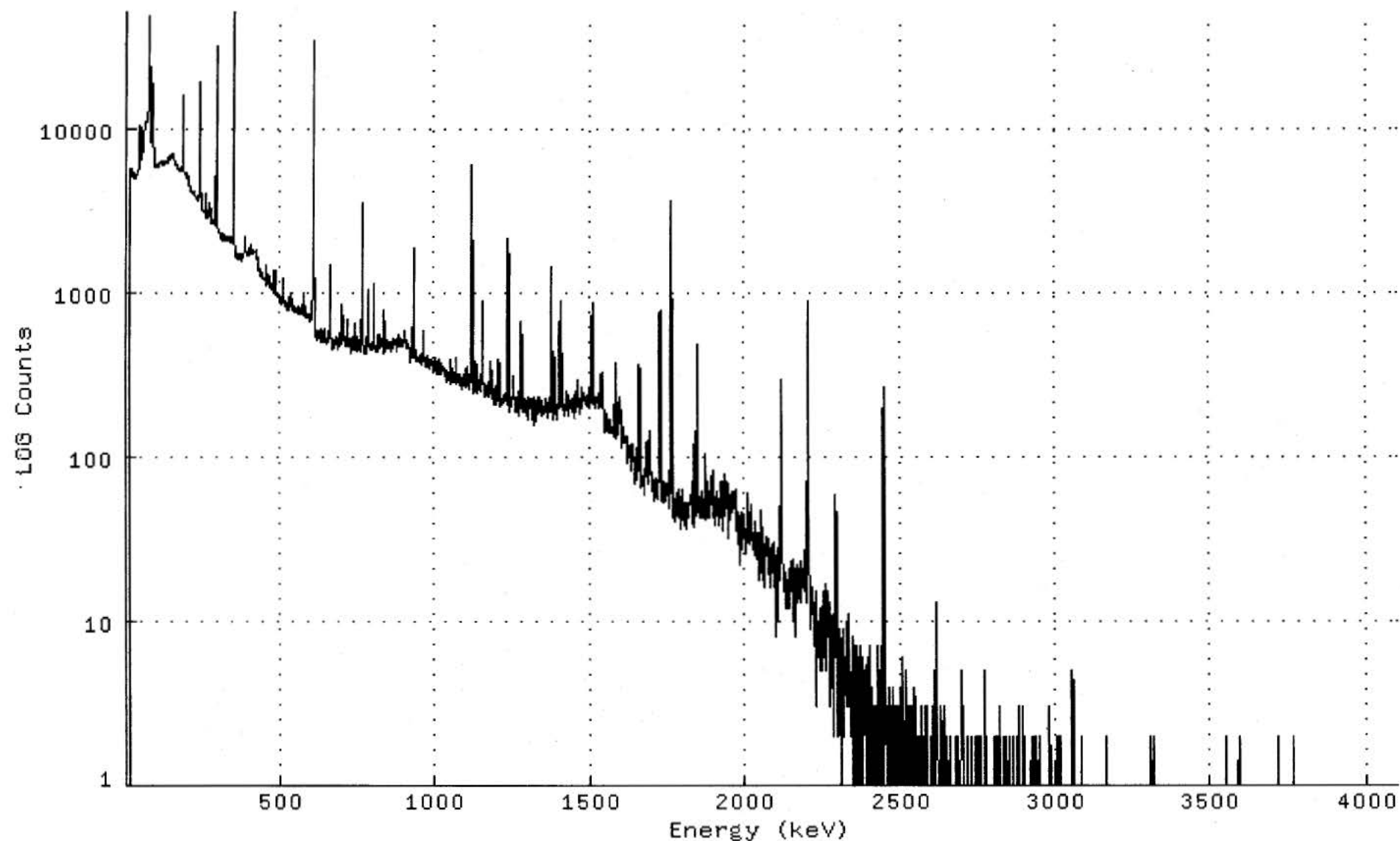
Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-135	2.30E+06Y	1.00	1.439E+01	1.439E+01	0.589E+01	40.91	
AM-243	7380.00Y	1.00	2.460E+02	2.460E+02	0.235E+02	9.56	
Total Activity :			2.604E+02	2.604E+02			

Grand Total Activity : 5.716E+03 5.746E+03

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916704\_GE4\_GAS1102\_169781.CNF;1  
Title :  
Sample Title: AR-01-31-110928  
Start Time: 25-OCT-2011 07:48 Sample Time: 28-SEP-2011 00:00 Energy Offset: 6.14527E-01  
Real Time : 0 01:01:44.36 Sample ID : 1109167-04 Energy Slope : 9.99512E-01  
Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00



## Channel Contents for DKA100:[GAMMA.SCUSR.ARCHIVE] SMP\_110916704\_GE4\_GAS1102\_1697

## Channel

1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	2	284	5063	5662
17:	5625	5427	5229	5247	5046	5059	5312	5155
25:	5035	5018	4976	5024	4974	5129	5206	5142
33:	5082	5083	5203	5251	5170	5396	5511	5477
41:	5566	6048	6130	6717	9702	10332	7362	6356
49:	6785	6839	7778	9949	9514	7488	7157	7633
57:	8092	8779	9412	9846	10222	10636	10696	10428
65:	10761	11021	11301	11151	11141	11342	11564	13342
73:	23369	34494	34142	47997	36405	14874	10843	8961
81:	8088	8236	9442	8683	10963	18330	16807	11034
89:	11425	8468	6964	6905	6660	6507	6002	5734
97:	5832	5996	5966	5710	5764	5778	5719	5775
105:	5846	5877	5976	5988	6184	6190	6192	6138
113:	6067	6077	5960	6085	6197	5897	5879	5967
121:	5942	6039	5954	6051	6146	6242	6126	6271
129:	6219	6166	6178	6128	6134	6076	6285	6252
137:	6409	6527	6565	6514	6412	6610	6786	6644
145:	6402	6519	6577	6718	6865	6758	6854	6877
153:	7027	6852	6455	6487	6451	6218	6287	6148
161:	6024	6078	5886	5886	5796	5737	5712	5651
169:	5612	5510	5669	5567	5587	5494	5542	5525
177:	5468	5469	5544	5650	5748	5665	5673	8406
185:	15833	14925	7525	5461	5357	5268	5244	5211
193:	5290	5232	5287	5330	5215	4961	4992	4886
201:	5017	4823	4679	4626	4435	4378	4279	4443
209:	4292	4283	4223	4085	4138	3991	4088	4132
217:	4030	4093	4049	3971	3976	3950	3954	3859
225:	3850	3769	3723	3803	3775	3827	3791	3782
233:	3551	3746	3902	3895	3694	3794	3938	8721
241:	18812	14793	5094	3194	3253	3216	3156	3200
249:	3114	3082	3096	3091	3097	3040	3148	3128
257:	3478	3979	3603	3021	2846	2823	2862	2850
265:	2855	2972	2865	3044	3274	3020	3063	2931
273:	3256	3536	3057	2784	2620	2720	2676	2777
281:	2737	2754	2650	2651	2599	2663	2752	2628
289:	2519	2612	2662	2861	9310	30087	31016	9960
297:	2850	2459	2408	2321	2405	2299	2380	2263
305:	2258	2285	2150	2158	2155	2180	2136	2215
313:	2297	2293	2153	2132	2076	2177	2172	2101
321:	2066	2122	2259	2118	2101	2046	2112	2107
329:	2115	2092	2054	2121	2127	2202	2087	2122
337:	2146	2149	2021	2093	2028	2168	2053	2006
345:	2073	2022	2093	2240	3825	20537	51707	38702
353:	8569	2090	1695	1691	1730	1631	1671	1671
361:	1618	1693	1714	1591	1675	1615	1597	1637
369:	1672	1686	1727	1600	1652	1618	1630	1552
377:	1732	1651	1689	1611	1615	1711	1625	1649
385:	1805	2072	2098	2159	1923	1745	1701	1691
393:	1724	1739	1728	1729	1667	1673	1736	1857
401:	1830	1730	1825	1962	1907	1819	1781	1769
409:	1726	1709	1705	1698	1779	1813	1775	1747
417:	1756	1745	1755	1747	1750	1831	1651	1741
425:	1745	1713	1597	1636	1646	1416	1365	1393

433:	1376	1308	1272	1370	1275	1348	1259	1284
441:	1302	1233	1235	1275	1227	1266	1186	1217
449:	1178	1178	1179	1205	1196	1453	1329	1243
457:	1203	1094	1163	1287	1291	1209	1166	1119
465:	1125	1078	1120	1097	1258	1180	1055	1049
473:	1089	1097	1094	1076	1041	1069	1133	1352
481:	1125	988	1019	996	1047	1348	1279	1079
489:	952	964	940	961	952	963	925	931
497:	937	970	871	908	954	898	860	833
505:	909	890	893	967	1170	1207	1170	1060
513:	874	815	848	826	836	843	879	867
521:	778	846	838	809	811	786	850	829
529:	805	797	831	919	988	977	868	818
537:	873	868	834	819	770	854	909	844
545:	819	827	774	760	796	774	785	758
553:	791	807	750	751	737	795	780	814
561:	811	749	741	753	761	788	791	743
569:	740	772	745	814	785	839	777	711
577:	786	798	983	974	878	759	792	699
585:	724	722	762	720	736	707	724	722
593:	733	705	744	730	660	732	716	731
601:	702	683	717	770	736	1064	6035	25157
609:	33821	14837	2318	663	538	635	607	637
617:	623	587	557	577	567	548	549	514
625:	559	529	553	538	552	567	597	550
633:	567	572	508	501	559	515	576	575
641:	501	492	513	501	598	535	560	514
649:	501	508	485	525	514	527	520	535
657:	496	528	520	568	594	518	589	1129
665:	1452	1087	562	498	509	482	464	449
673:	524	460	509	506	456	483	507	493
681:	523	487	534	525	514	510	514	505
689:	525	444	480	470	508	495	512	492
697:	563	515	522	478	579	757	846	616
705:	537	596	553	504	515	534	489	530
713:	477	468	497	516	471	583	677	642
721:	507	473	485	527	471	474	507	503
729:	421	500	525	512	510	486	448	458
737:	486	476	455	498	601	637	564	517
745:	505	451	480	435	467	445	480	527
753:	532	492	450	458	445	456	504	450
761:	455	442	438	492	541	884	2256	3455
769:	1971	713	477	459	475	459	451	453
777:	424	430	443	439	446	425	452	644
785:	1046	996	634	473	464	465	464	482
793:	484	462	473	442	450	488	498	479
801:	453	446	454	526	953	1120	810	485
809:	429	462	462	476	441	468	459	493
817:	438	444	489	553	541	508	460	487
825:	545	494	518	480	468	479	496	511
833:	512	427	449	488	516	741	767	573
841:	439	451	456	459	444	485	512	497
849:	484	482	459	487	460	468	452	491
857:	480	498	433	452	457	469	429	467
865:	457	504	479	493	520	509	508	481
873:	509	494	497	493	473	493	489	526
881:	506	438	499	518	495	509	551	491
889:	503	502	505	476	480	528	505	468
897:	476	503	496	476	508	527	552	583
905:	519	500	509	461	482	504	497	494

913:	463	470	482	484	453	455	437	462
921:	422	428	420	370	434	399	399	435
929:	432	444	528	731	1631	1834	1004	498
937:	407	381	418	412	448	439	392	401
945:	380	381	405	385	379	409	391	368
953:	392	388	394	371	365	388	363	365
961:	425	384	503	578	454	390	378	386
969:	397	377	353	375	401	370	413	363
977:	395	388	389	356	381	346	377	388
985:	384	389	386	361	386	366	381	378
993:	362	375	370	369	380	322	379	368
1001:	404	349	373	335	350	336	347	338
1009:	320	384	377	313	391	349	335	364
1017:	362	344	316	359	373	351	339	335
1025:	356	351	344	337	342	308	339	338
1033:	324	311	318	335	302	285	286	305
1041:	315	308	296	328	289	300	327	291
1049:	278	320	367	391	362	322	286	297
1057:	336	291	309	289	307	303	301	301
1065:	282	314	331	321	365	403	348	277
1073:	285	319	312	298	300	288	303	287
1081:	304	313	271	281	258	274	268	265
1089:	299	274	269	297	301	273	314	297
1097:	311	305	263	272	296	314	336	352
1105:	282	312	298	267	307	319	287	282
1113:	257	277	270	296	359	1030	3624	5864
1121:	3949	1084	354	241	277	280	261	247
1129:	305	286	320	278	376	341	333	264
1137:	240	266	258	290	270	268	259	296
1145:	257	264	250	267	289	291	279	276
1153:	371	677	891	656	353	278	280	228
1161:	273	265	240	254	264	267	248	238
1169:	247	259	266	279	281	245	255	233
1177:	265	252	243	280	322	380	292	255
1185:	251	223	254	247	229	258	211	245
1193:	210	220	231	222	239	231	239	269
1201:	207	221	251	243	238	306	393	362
1209:	295	251	200	224	220	222	207	207
1217:	220	223	227	213	223	235	232	211
1225:	220	234	238	216	246	244	228	214
1233:	209	243	256	563	1583	2140	1413	468
1241:	241	236	188	212	230	227	202	225
1249:	215	216	225	303	308	309	239	234
1257:	200	214	201	185	203	229	231	219
1265:	210	208	217	189	201	177	223	252
1273:	218	204	235	204	199	243	328	572
1281:	662	472	289	243	226	205	188	217
1289:	201	185	225	207	217	180	187	178
1297:	207	199	219	167	192	228	200	203
1305:	225	196	213	223	199	200	216	191
1313:	167	186	193	209	225	217	218	187
1321:	214	203	154	232	177	165	177	182
1329:	204	216	192	184	199	218	196	229
1337:	199	212	187	195	231	214	179	219
1345:	185	187	185	205	202	195	195	188
1353:	184	189	207	189	209	222	188	196
1361:	188	178	187	202	175	174	202	229
1369:	194	203	195	186	201	187	258	672
1377:	1292	1411	672	275	232	170	233	321
1385:	414	403	271	203	212	188	181	206



1393:	170	208	198	184	201	198	215	362
1401:	660	540	342	234	204	350	769	896
1409:	633	287	205	190	201	202	221	202
1417:	177	179	199	199	187	207	197	215
1425:	217	249	221	198	182	195	222	178
1433:	234	199	220	216	197	203	211	200
1441:	226	212	192	188	211	203	193	203
1449:	216	205	173	222	248	219	186	209
1457:	194	228	226	285	295	234	223	203
1465:	207	222	187	201	183	210	214	199
1473:	225	201	206	203	263	232	246	223
1481:	219	228	219	222	230	218	206	219
1489:	217	235	202	222	210	227	225	213
1497:	244	202	224	220	257	196	227	233
1505:	224	254	338	595	866	625	355	241
1513:	210	232	198	229	215	211	202	217
1521:	226	217	232	211	233	211	211	203
1529:	243	236	221	196	208	200	217	205
1537:	263	315	328	269	224	239	280	276
1545:	204	182	173	141	161	158	179	142
1553:	153	142	179	181	157	170	147	170
1561:	148	138	156	145	141	146	169	152
1569:	162	141	142	139	145	148	143	155
1577:	158	131	139	144	162	266	366	304
1585:	185	138	130	153	137	136	165	164
1593:	150	209	220	159	161	170	231	222
1601:	168	134	112	144	147	133	147	151
1609:	123	124	144	125	125	126	121	131
1617:	126	133	114	120	134	110	111	91
1625:	115	113	102	117	98	104	110	114
1633:	89	95	83	105	119	104	115	95
1641:	104	120	101	93	98	80	98	78
1649:	69	98	113	78	85	94	72	89
1657:	101	105	119	231	357	328	154	89
1665:	87	98	65	68	76	71	77	76
1673:	67	72	79	82	58	76	74	85
1681:	83	91	118	122	118	76	93	70
1689:	68	70	95	111	143	142	90	96
1697:	80	78	80	69	77	72	80	61
1705:	72	67	71	71	54	70	57	75
1713:	69	64	71	68	56	63	59	72
1721:	73	61	72	70	79	70	117	340
1729:	740	767	485	147	54	62	60	54
1737:	52	66	71	66	58	68	60	54
1745:	55	56	60	65	58	69	65	63
1753:	60	68	83	59	55	49	65	60
1761:	101	332	1492	3488	3623	1797	458	100
1769:	43	50	57	51	43	45	55	50
1777:	48	40	58	50	60	56	45	44
1785:	42	56	47	51	64	46	47	36
1793:	37	42	57	46	53	44	46	64
1801:	41	49	51	49	53	46	38	44
1809:	40	53	36	41	53	50	43	49
1817:	42	52	43	52	52	52	56	55
1825:	51	53	59	48	40	39	52	70
1833:	49	65	37	64	85	103	119	74
1841:	66	61	52	44	78	267	482	478
1849:	284	108	53	46	54	49	49	57
1857:	53	43	44	62	43	53	56	53
1865:	44	45	43	56	55	42	63	80

1873:	99	103	60	41	70	47	46	51
1881:	42	43	61	49	47	43	60	58
1889:	57	68	62	51	51	54	71	83
1897:	73	62	61	42	43	57	46	38
1905:	50	52	50	45	44	51	48	46
1913:	62	51	45	44	49	51	38	45
1921:	52	52	53	71	58	54	47	70
1929:	49	35	37	48	55	62	75	68
1937:	78	61	56	71	60	61	48	48
1945:	57	32	50	43	50	68	42	46
1953:	59	52	41	44	62	57	48	59
1961:	56	46	49	53	50	62	50	51
1969:	60	48	41	44	64	35	46	39
1977:	34	36	44	29	37	40	41	31
1985:	30	22	43	46	44	41	35	46
1993:	27	38	32	39	43	45	42	28
2001:	34	30	33	26	35	38	40	30
2009:	40	60	52	36	29	46	29	41
2017:	36	51	41	31	33	43	31	31
2025:	31	28	31	34	27	30	40	26
2033:	34	29	25	35	32	24	34	27
2041:	33	32	29	28	18	30	30	34
2049:	20	39	40	30	38	47	28	30
2057:	21	31	18	37	22	22	26	28
2065:	16	27	33	30	28	25	29	26
2073:	29	28	19	23	20	26	32	25
2081:	22	23	16	21	26	20	23	22
2089:	23	29	29	17	24	17	16	22
2097:	30	18	24	21	22	8	25	10
2105:	17	20	25	19	23	34	26	29
2113:	18	25	20	29	87	218	291	163
2121:	65	27	18	19	19	15	19	18
2129:	19	14	20	12	12	12	14	12
2137:	15	15	14	18	16	12	20	18
2145:	21	17	15	22	23	20	20	21
2153:	19	21	10	15	24	14	14	21
2161:	8	18	18	13	21	18	14	13
2169:	22	20	13	14	17	14	21	19
2177:	15	13	15	17	17	23	15	20
2185:	16	21	19	19	18	15	20	24
2193:	27	25	17	24	21	16	13	16
2201:	41	121	472	882	848	403	95	23
2209:	15	13	13	9	10	9	14	12
2217:	16	15	15	11	12	13	7	10
2225:	10	9	8	5	5	3	15	9
2233:	10	6	6	9	8	6	11	12
2241:	12	12	5	11	9	9	9	6
2249:	5	9	10	15	10	7	9	9
2257:	7	5	9	6	17	11	9	13
2265:	15	8	14	9	11	8	3	8
2273:	4	5	13	9	4	8	6	10
2281:	6	6	2	10	6	7	11	6
2289:	6	10	8	29	55	59	37	22
2297:	6	7	2	4	6	9	6	7
2305:	6	4	1	4	3	4	7	7
2313:	9	8	6	5	4	2	6	4
2321:	4	6	6	6	4	3	3	4
2329:	5	10	5	5	11	10	4	3
2337:	5	2	4	4	2	2	3	8
2345:	3	7	4	1	2	5	6	7

2353:	2	1	4	5	0	4	2	7
2361:	5	4	6	2	6	1	2	2
2369:	5	3	7	5	1	3	3	1
2377:	3	6	1	4	4	4	3	3
2385:	5	4	0	2	3	1	3	5
2393:	6	1	3	2	3	3	7	1
2401:	3	3	1	4	1	4	0	2
2409:	3	4	1	3	3	2	1	1
2417:	1	2	1	3	2	3	2	3
2425:	0	1	7	4	2	5	1	3
2433:	1	0	1	2	7	3	1	3
2441:	1	1	2	4	14	57	149	263
2449:	204	88	22	3	3	0	3	1
2457:	2	0	2	1	4	1	2	3
2465:	1	1	3	0	0	2	1	2
2473:	4	3	2	4	1	2	0	0
2481:	3	2	3	0	3	0	3	2
2489:	1	1	0	1	2	0	3	0
2497:	1	1	4	3	2	0	3	1
2505:	0	3	6	3	2	0	0	0
2513:	0	2	1	2	1	1	5	0
2521:	2	0	3	1	2	2	2	3
2529:	0	0	1	3	2	3	0	0
2537:	1	0	0	2	1	3	2	1
2545:	4	3	2	1	0	1	2	1
2553:	0	1	0	1	1	2	0	2
2561:	1	1	0	0	1	0	0	0
2569:	0	3	0	2	1	2	0	1
2577:	3	0	3	3	0	0	1	0
2585:	1	3	1	0	1	1	0	1
2593:	0	0	1	0	0	0	2	1
2601:	1	1	3	2	1	0	0	0
2609:	1	2	2	1	2	13	13	13
2617:	8	4	2	0	0	0	1	0
2625:	0	0	3	3	0	0	1	2
2633:	0	1	1	1	2	3	2	1
2641:	0	2	2	1	2	0	2	1
2649:	1	0	1	1	0	0	0	1
2657:	2	0	1	0	1	0	1	1
2665:	0	0	0	0	0	1	0	0
2673:	0	1	0	2	1	1	0	0
2681:	2	0	0	0	1	0	1	0
2689:	1	0	0	0	0	2	5	2
2697:	3	2	3	1	0	1	3	1
2705:	1	0	0	1	0	1	1	0
2713:	0	1	1	2	1	0	0	0
2721:	1	0	1	1	1	0	2	1
2729:	1	0	1	0	1	0	0	1
2737:	1	0	2	0	2	0	2	0
2745:	0	0	2	0	0	2	1	1
2753:	0	0	1	1	2	1	1	0
2761:	1	0	1	0	0	0	0	1
2769:	1	5	2	3	1	1	1	1
2777:	1	2	0	1	1	0	0	1
2785:	0	1	0	0	0	0	1	0
2793:	0	0	1	1	0	0	0	1
2801:	1	2	0	0	1	2	0	1
2809:	0	2	0	0	0	2	1	0
2817:	1	1	0	3	0	0	0	0
2825:	1	0	0	1	0	0	1	0

2833:	1	2	1	0	0	0	0	2
2841:	0	0	1	0	0	0	0	2
2849:	0	0	1	0	0	0	0	0
2857:	0	1	1	1	2	0	1	0
2865:	0	1	0	0	1	0	0	0
2873:	2	1	0	0	0	0	1	3
2881:	1	1	1	1	1	0	0	0
2889:	0	0	1	0	1	0	3	1
2897:	2	1	0	0	1	0	1	0
2905:	0	0	1	1	0	0	0	0
2913:	0	0	1	0	0	1	0	1
2921:	2	1	2	0	1	0	2	0
2929:	0	0	1	0	0	1	0	0
2937:	0	2	0	0	0	1	0	0
2945:	0	0	2	0	0	0	0	0
2953:	0	1	0	0	0	0	0	0
2961:	0	0	0	0	0	0	0	0
2969:	1	0	0	0	0	0	0	1
2977:	1	0	2	1	3	0	0	0
2985:	0	0	0	0	0	0	0	0
2993:	0	0	0	0	0	0	0	0
3001:	2	0	0	0	0	0	0	1
3009:	2	0	0	0	0	0	2	0
3017:	2	0	1	0	0	0	0	0
3025:	1	0	0	1	0	0	0	0
3033:	0	0	0	0	0	0	0	0
3041:	0	0	1	0	0	0	0	0
3049:	0	1	0	0	1	1	5	4
3057:	0	0	0	1	1	1	0	0
3065:	0	0	0	0	0	0	0	0
3073:	0	0	1	0	0	0	0	1
3081:	0	0	0	2	0	0	0	1
3089:	0	0	1	1	0	0	1	0
3097:	0	1	0	0	0	0	0	0
3105:	0	0	0	0	0	0	0	0
3113:	0	1	0	0	0	0	0	0
3121:	0	0	0	0	0	1	0	0
3129:	0	0	0	0	0	0	0	0
3137:	0	0	0	1	0	0	1	1
3145:	0	0	1	1	0	0	0	0
3153:	0	0	0	0	0	0	0	0
3161:	2	0	1	0	0	0	0	0
3169:	0	0	0	1	0	1	1	0
3177:	0	0	0	0	0	1	1	0
3185:	0	0	0	0	1	0	0	0
3193:	0	0	0	0	0	0	0	0
3201:	0	0	0	0	0	0	0	0
3209:	0	0	0	0	0	0	0	0
3217:	0	0	0	0	0	0	0	0
3225:	0	0	0	0	0	1	0	0
3233:	0	0	0	0	0	0	0	0
3241:	1	0	0	1	0	0	0	0
3249:	0	0	0	0	1	0	0	0
3257:	0	1	0	0	0	0	0	0
3265:	0	1	0	0	0	0	0	0
3273:	0	0	0	0	0	0	0	1
3281:	0	0	1	0	0	0	0	0
3289:	0	0	0	0	0	0	0	0
3297:	0	0	0	0	0	0	2	0
3305:	1	2	0	0	0	0	1	0

3313:	0	2	0	0	0	1	1	0
3321:	0	0	0	0	0	1	0	0
3329:	0	0	0	0	0	0	0	0
3337:	0	0	0	0	0	0	0	0
3345:	0	0	0	0	0	0	0	0
3353:	1	0	0	0	1	0	0	0
3361:	0	0	0	0	0	0	0	0
3369:	0	0	0	0	0	1	0	0
3377:	0	0	0	1	0	0	0	0
3385:	0	0	0	0	0	1	0	1
3393:	0	0	0	1	0	0	0	0
3401:	0	0	0	0	0	0	0	0
3409:	1	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	1	0	0	0	0
3433:	0	0	0	0	0	0	0	0
3441:	0	0	0	0	0	0	0	0
3449:	0	1	0	1	0	0	1	1
3457:	0	0	0	1	0	1	0	0
3465:	0	0	1	0	0	0	0	0
3473:	0	0	0	0	0	0	1	0
3481:	0	0	0	0	0	0	0	1
3489:	0	0	0	0	0	0	0	0
3497:	0	0	0	0	0	0	0	0
3505:	1	0	0	0	0	0	0	0
3513:	0	0	0	1	0	0	0	0
3521:	0	0	0	0	0	0	0	0
3529:	0	0	0	0	0	0	0	1
3537:	0	0	0	0	0	0	0	0
3545:	0	0	0	2	0	0	0	0
3553:	0	0	0	0	0	0	0	1
3561:	0	0	0	0	0	0	0	0
3569:	0	0	0	0	0	0	0	0
3577:	1	1	0	0	0	0	0	0
3585:	0	0	0	0	0	2	1	0
3593:	1	0	1	0	0	0	0	1
3601:	0	1	0	0	0	0	0	0
3609:	0	1	0	1	0	1	0	0
3617:	0	0	0	0	0	0	0	0
3625:	0	0	0	0	0	1	1	0
3633:	0	0	0	0	0	0	0	0
3641:	0	0	0	0	1	0	0	0
3649:	0	0	0	0	0	0	0	0
3657:	0	0	0	1	0	0	0	0
3665:	0	0	0	1	0	0	0	0
3673:	0	0	0	0	0	0	0	0
3681:	0	0	1	0	0	0	0	0
3689:	0	0	0	0	0	0	0	0
3697:	0	0	0	0	0	1	0	0
3705:	0	0	1	0	1	0	0	0
3713:	0	1	0	0	2	0	1	0
3721:	0	0	0	1	0	0	0	0
3729:	0	0	0	0	0	0	0	0
3737:	0	0	0	0	0	0	0	0
3745:	0	1	0	0	0	0	1	0
3753:	1	0	0	0	0	0	0	0
3761:	0	0	0	2	0	0	0	0
3769:	0	0	0	0	0	0	0	0
3777:	0	0	0	1	0	0	0	0
3785:	0	0	0	0	1	0	0	0

3793:	0	0	0	0	0	0	0	0
3801:	0	0	1	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0
3825:	0	0	0	0	1	0	0	0
3833:	0	0	0	0	0	0	0	0
3841:	0	0	0	1	0	0	0	1
3849:	0	0	0	0	1	0	0	0
3857:	0	0	0	0	0	0	0	0
3865:	1	0	0	1	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	1	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	1	0	0	0	0	0	0	0
3905:	0	0	0	0	0	0	0	0
3913:	0	0	0	0	1	0	0	1
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	0	0	0	1	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	1	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	0	0	0	0	0	0	0
3985:	0	0	0	0	0	0	1	0
3993:	0	0	0	1	0	0	0	0
4001:	0	0	0	0	0	0	0	1
4009:	0	0	1	0	1	0	0	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	0	1	0	0
4033:	0	0	0	0	0	0	1	0
4041:	0	0	0	0	0	0	0	0
4049:	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	0	0	0
4065:	0	0	0	0	0	0	1	0
4073:	1	0	0	0	1	0	0	1
4081:	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0

Sample ID : 1109167-05

Page : 1  
Acquisition date : 25-OCT-2011 06:55:57

VAX/VMS Peak Search Report Generated 25-OCT-2011 07:57:22.24

*1012874*

Configuration : DKA100: [GAMMA.SCUSR.ARCHIVE] SMP\_110916705\_GE3\_GAS1102\_169777.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : JB-11-31-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 06:55:57  
 Sample ID : 1109167-05 Sample Quantity : 5.68510E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE3 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:45.70 1.3%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	46.34*	1169	3452	1.17	46.62	44	6	17.0		PB-210
0	52.61	272	4885	1.71	52.89	51	7	85.8		
0	63.16*	997	5727	1.83	63.44	61	6	24.9		TH-234
0	76.27*	9998	9964	3.56	76.55	72	10	4.2		
0	93.37*	1125	4497	1.07	93.66	91	6	20.3		
0	144.21*	391	3775	1.70	144.50	141	7	53.1		U-235 CE-141
0	154.40	379	3728	2.39	154.69	152	7	54.5		
0	171.23	184	2736	4.05	171.52	169	6	91.0		
0	186.10*	2597	4023	1.89	186.39	182	9	9.7		RA-226
0	204.91	125	2280	1.93	205.20	203	6	121.9		U-235
0	227.10	116	1929	3.54	227.39	225	6	120.9		
3	238.77*	388	725	1.20	239.07	238	9	19.3	2.08E+01	PB-212
3	242.04*	2884	1306	1.46	242.33	238	9	5.1		RA-224
0	257.96	307	2020	2.95	258.25	254	8	52.1		
0	269.92*	309	1949	2.98	270.21	267	8	50.6		
0	295.32*	6172	1757	1.76	295.61	291	8	3.5		PB-214
0	351.97*	10515	1612	1.65	352.27	347	10	2.4		PB-214
0	388.41	91	976	1.26	388.71	386	7	115.1		
0	402.86	141	1241	4.71	403.16	399	9	91.2		RN-219
0	436.92	81	600	2.05	437.22	435	6	98.2		
0	454.71	99	654	1.24	455.02	452	7	88.7		
0	462.57	106	678	2.78	462.87	460	8	87.1		
0	487.25	67	555	1.78	487.55	485	7	119.9		
0	510.57*	124	813	2.44	510.88	506	11	92.2		
0	582.49*	171	557	1.98	582.81	578	9	52.6		TL-208
4	604.49	83	212	2.53	604.80	603	14	52.8	3.55E+00	
4	609.41*	7252	270	1.55	609.73	603	14	2.5		BI-214
0	623.15	56	238	2.08	623.46	621	6	92.1		RU-106
0	664.82	149	523	1.82	665.14	660	11	61.5		
0	703.52	70	341	2.06	703.84	700	8	94.3		
0	721.51	55	350	2.37	721.83	717	8	121.9		
0	728.11	54	294	2.43	728.43	725	7	107.8		BI-212
0	753.29	41	248	1.38	753.62	751	6	125.6		
0	768.39*	685	426	1.66	768.71	764	10	13.6		
0	785.76	220	471	1.90	786.09	780	12	41.7		

AG

10/25/11

0117

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	806.74	161	322	2.14	807.07	803	8	41.8		
0	838.56	109	291	1.73	838.89	835	8	57.9		
7	904.95	95	317	3.70	905.29	901	15	69.7	1.33E+00	
7	911.32*	154	273	2.71	911.65	901	15	40.6		AC-228
0	934.23	361	363	2.06	934.57	930	10	22.4		
0	963.74	69	249	2.12	964.07	961	7	80.1		
0	969.89	63	238	1.75	970.22	968	7	85.2		AC-228
0	1120.52	1554	294	1.99	1120.87	1115	12	6.7		BI-214
0	1155.11	128	214	2.01	1155.46	1152	8	43.4		
0	1238.44*	551	278	2.15	1238.79	1234	10	14.2		
0	1279.58	113	268	2.07	1279.94	1274	12	60.9		
0	1377.70*	386	120	2.29	1378.07	1374	8	14.2		
0	1384.73	66	164	2.14	1385.09	1383	8	72.7		
2	1398.94	19	32	2.58	1399.30	1398	14	77.2	2.74E+00	
2	1402.05	117	113	2.47	1402.41	1398	14	35.5		
2	1408.36	195	115	2.30	1408.72	1398	14	23.0		
0	1461.07*	583	165	2.28	1461.43	1457	10	11.8		K-40
0	1509.82	198	178	2.49	1510.19	1505	12	30.8		
0	1519.29	29	67	2.95	1519.66	1518	5	90.8		
0	1584.03	103	87	2.35	1584.40	1580	11	40.1		
0	1593.76	28	85	1.51	1594.14	1591	7	116.9		
0	1619.91	28	75	2.86	1620.29	1616	10	124.1		BI-212
0	1629.57	29	62	1.61	1629.95	1626	9	102.4		
0	1661.81	94	79	2.75	1662.19	1656	11	42.3		
0	1729.77	308	49	2.32	1730.16	1723	13	14.7		
0	1764.79*	1156	51	2.33	1765.18	1759	13	6.4		BI-214
0	1839.44	23	38	5.72	1839.83	1835	9	108.0		
0	1847.72	171	27	2.64	1848.11	1844	10	19.1		
0	1890.27	18	23	3.11	1890.67	1887	8	106.8		
0	1903.35	41	38	14.29	1903.75	1895	17	75.5		
0	1922.83	28	41	5.75	1923.22	1916	15	106.1		
0	1939.88	26	36	5.20	1940.27	1936	10	97.1		
0	2074.53	16	8	3.86	2074.94	2072	8	79.1		
0	2119.22	79	19	2.19	2119.63	2115	11	31.0		
0	2132.11	9	6	1.74	2132.52	2129	8	120.4		
0	2168.78	7	5	1.76	2169.19	2166	6	137.5		
0	2187.14	9	9	5.67	2187.56	2182	9	137.4		
0	2204.47	304	16	2.71	2204.88	2199	13	12.7		BI-214
0	2293.88	24	5	1.54	2294.30	2290	9	52.5		
0	2448.29	88	0	2.69	2448.72	2444	10	21.3		
0	2615.14*	43	0	2.85	2615.57	2612	8	31.9		TL-208
0	2770.70	7	0	1.16	2771.14	2767	7	75.6		



Total number of lines in spectrum 77  
Number of unidentified lines 40  
Number of lines tentatively identified by NID 37 48.05%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.904E+01	1.904E+01	0.292E+01	15.32	
TL-208	1.41E+10Y	1.00	5.748E-01	5.748E-01	1.678E-01	29.19	
PB-210	22.26Y	1.00	2.178E+01	2.183E+01	0.440E+01	20.13	
BI-212	1.41E+10Y	1.00	1.054E+00	1.054E+00	0.984E+00	93.35	
PB-212	1.41E+10Y	1.00	6.583E-01	6.583E-01	1.430E-01	21.72	
BI-214	1602.00Y	1.00	2.769E+01	2.769E+01	0.172E+01	6.22	
PB-214	1602.00Y	1.00	2.896E+01	2.897E+01	0.205E+01	7.09	
RN-219	3.28E+04Y	1.00	2.533E+00	2.533E+00	2.326E+00	91.82	
RA-224	1.41E+10Y	1.00	5.569E+01	5.569E+01	0.617E+01	11.09	
RA-226	1602.00Y	1.00	5.107E+01	5.107E+01	9.370E+01	183.49	
AC-228	1.41E+10Y	1.00	1.245E+00	1.245E+00	0.471E+00	37.84	
TH-234	4.47E+09Y	1.00	1.562E+01	1.562E+01	0.419E+01	26.81	
U-235	7.04E+08Y	1.00	1.825E+00	1.825E+00	2.254E+00	123.51	
Total Activity :			2.277E+02	2.278E+02			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RU-106	368.20D	1.05	9.907E-01	1.043E+00	0.973E+00	93.30	
CE-141	32.50D	1.79	4.632E-01	8.294E-01	4.857E-01	58.55	
Total Activity :			1.454E+00	1.872E+00			

Grand Total Activity : 2.292E+02 2.297E+02

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr 2-Sigma			Status
				pCi/GRAM	pCi/GRAM	%Error	
K-40	1460.81	10.67*	3.789E-01	1.904E+01	1.904E+01	15.32	OK
Final Mean for 1 Valid Peaks = 1.904E+01+/- 2.916E+00 ( 15.32%)							
TL-208	583.14	30.22*	8.029E-01	9.286E-01	9.286E-01	53.71	OK
	860.37	4.48	5.645E-01	-----	Line Not Found	-----	Absent
	2614.66	35.85	3.019E-01	5.296E-01	5.296E-01	33.64	OK
Final Mean for 2 Valid Peaks = 5.748E-01+/- 1.678E-01 ( 29.19%)							
PB-210	46.50	4.05*	1.750E+00	2.178E+01	2.183E+01	20.13	OK
Final Mean for 1 Valid Peaks = 2.183E+01+/- 4.395E+00 ( 20.13%)							
BI-212	727.17	11.80*	6.552E-01	9.290E-01	9.290E-01	108.27	OK
	1620.62	2.75	3.568E-01	3.775E+00	3.775E+00	124.50	OK
Final Mean for 2 Valid Peaks = 1.054E+00+/- 9.836E-01 ( 93.35%)							
PB-212	238.63	44.60*	1.744E+00	6.583E-01	6.583E-01	21.72	OK
	300.09	3.41	1.461E+00	-----	Line Not Found	-----	Absent
Final Mean for 1 Valid Peaks = 6.583E-01+/- 1.430E-01 ( 21.72%)							
BI-214	609.31	46.30*	7.707E-01	2.684E+01	2.684E+01	10.85	OK
	1120.29	15.10	4.552E-01	2.986E+01	2.986E+01	12.52	OK
	1764.49	15.80	3.416E-01	2.829E+01	2.829E+01	11.72	OK
	2204.22	4.98	3.132E-01	2.575E+01	2.575E+01	16.40	OK
Final Mean for 4 Valid Peaks = 2.769E+01+/- 1.724E+00 ( 6.22%)							
PB-214	295.21	19.19	1.480E+00	2.869E+01	2.869E+01	9.87	OK
	351.92	37.19*	1.276E+00	2.927E+01	2.927E+01	10.18	OK
Final Mean for 2 Valid Peaks = 2.897E+01+/- 2.052E+00 ( 7.09%)							
RN-219	401.80	6.50*	1.133E+00	2.533E+00	2.533E+00	91.82	OK
Final Mean for 1 Valid Peaks = 2.533E+00+/- 2.326E+00 ( 91.82%)							
RA-224	240.98	3.95*	1.732E+00	5.569E+01	5.569E+01	11.09	OK
Final Mean for 1 Valid Peaks = 5.569E+01+/- 6.174E+00 ( 11.09%)							
RA-226	186.21	3.28*	2.048E+00	5.107E+01	5.107E+01	183.49	OK
Final Mean for 1 Valid Peaks = 5.107E+01+/- 9.370E+01 (183.49%)							
AC-228	338.32	11.40	1.320E+00	-----	Line Not Found	-----	Absent

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr 2-Sigma		%Error	Status
				pCi/GRAM	pCi/GRAM		
	911.07	27.70*	5.376E-01	1.366E+00	1.366E+00	41.64	OK
	969.11	16.60	5.106E-01	9.814E-01	9.814E-01	85.76	OK

Final Mean for 2 Valid Peaks = 1.245E+00+/- 4.712E-01 ( 37.84%)

TH-234	63.29	3.80*	2.218E+00	1.562E+01	1.562E+01	26.81	OK
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Final Mean for 1 Valid Peaks = 1.562E+01+/- 4.188E+00 ( 26.81%)

U-235	143.76	10.50*	2.314E+00	2.126E+00	2.126E+00	56.42	<<WM Interf
	163.35	4.70	2.193E+00	-----	Line Not Found	-----	Absent
	205.31	4.70	1.931E+00	1.825E+00	1.825E+00	123.51	OK

Final Mean for 1 Valid Peaks = 1.825E+00+/- 2.254E+00 (123.51%)

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr 2-Sigma		%Error	Status
				pCi/GRAM	pCi/GRAM		
RU-106	621.84	9.80*	7.563E-01	9.907E-01	1.043E+00	93.30	OK

Final Mean for 1 Valid Peaks = 1.043E+00+/- 9.731E-01 ( 93.30%)

CE-141	145.44	48.40*	2.304E+00	4.632E-01	8.294E-01	58.55	OK
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Final Mean for 1 Valid Peaks = 8.294E-01+/- 4.857E-01 ( 58.55%)

Flag: "\*" = Keyline

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	1.904E+01	2.916E+00	1.712E+00	1.535E-01	11.118
RU-106	1.043E+00	9.731E-01	1.488E+00	2.095E-01	0.701
CE-141	8.294E-01	4.857E-01	4.640E-01	1.131E-01	1.787
TL-208	5.748E-01	1.678E-01	4.823E-01	4.777E-02	1.192
PB-210	2.183E+01	4.395E+00	3.943E+00	3.972E-01	5.536
BI-212	1.054E+00	9.836E-01	1.306E+00	1.208E-01	0.807
PB-212	6.583E-01	1.430E-01	3.236E-01	2.931E-02	2.034
BI-214	2.769E+01	1.724E+00	3.113E-01	3.044E-02	88.949
PB-214	2.897E+01	2.052E+00	3.588E-01	3.245E-02	80.721
RN-219	2.533E+00	2.326E+00	2.261E+00	2.158E-01	1.120
RA-224	5.569E+01	6.174E+00	3.436E+00	3.097E-01	16.205
RA-226	5.107E+01	9.370E+01	4.050E+00	7.419E+00	12.609
AC-228	1.245E+00	4.712E-01	6.422E-01	5.215E-02	1.939
TH-234	1.562E+01	4.188E+00	4.367E+00	3.974E-01	3.577
U-235	1.825E+00	2.254E+00	1.178E+00	2.199E-01	1.549

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.622E-01		1.224E+00	1.939E+00	1.929E-01	-0.135
NA-22	1.224E-01		1.164E-01	1.920E-01	1.760E-02	0.637
AL-26	1.755E-02		6.827E-02	1.226E-01	1.096E-02	0.143
TI-44	3.035E-02		1.267E-01	1.776E-01	1.803E-02	0.171
SC-46	2.679E-02		1.340E-01	2.334E-01	1.892E-02	0.115
V-48	1.092E-01		3.646E-01	6.351E-01	5.532E-02	0.172
CR-51	3.526E-01		1.590E+00	2.594E+00	2.364E-01	0.136
MN-54	5.260E-02		1.169E-01	1.864E-01	1.605E-02	0.282
CO-56	-5.223E-02		1.341E-01	2.041E-01	1.737E-02	-0.256
CO-57	9.359E-02		8.824E-02	1.488E-01	1.728E-02	0.629
CO-58	-1.985E-02		1.328E-01	2.058E-01	1.814E-02	-0.096
FE-59	-2.382E-02		2.928E-01	5.004E-01	5.126E-02	-0.048
CO-60	-4.616E-02		1.074E-01	1.794E-01	1.823E-02	-0.257
ZN-65	1.267E-01		2.560E-01	4.056E-01	3.952E-02	0.312
SE-75	-8.381E-02		1.844E-01	2.394E-01	2.048E-02	-0.350
RB-82	-1.038E-02		2.027E+00	2.540E+00	2.289E-01	-0.004
RB-83	5.076E-02		2.302E-01	3.705E-01	6.093E-02	0.137
KR-85	1.758E+01		2.057E+01	3.374E+01	3.379E+00	0.521
SR-85	1.024E-01		1.198E-01	1.966E-01	1.969E-02	0.521
Y-88	7.465E-03		1.073E-01	1.656E-01	1.480E-02	0.045
NB-93M	1.014E+01		9.991E+00	1.179E+01	8.718E+00	0.860
NB-94	6.717E-02		1.059E-01	1.875E-01	1.554E-02	0.358
NB-95	1.235E+00		2.531E-01	4.196E-01	3.809E-02	2.942
NB-95M	1.206E+02		6.879E+01	1.066E+02	9.713E+00	1.131
ZR-95	6.765E-02		2.471E-01	3.928E-01	3.908E-02	0.172
RU-103	1.511E-02		1.508E-01	2.420E-01	3.639E-02	0.062
AG-108M	1.213E-01	+	1.484E-01	1.710E-01	1.584E-02	0.709
CD-109	1.760E+01		4.167E+00	4.972E+00	8.017E-01	3.540

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AG-110M	-8.181E-03		9.920E-02	1.564E-01	1.475E-02	-0.052
SN-113	5.052E-02		1.699E-01	2.542E-01	2.469E-02	0.199
TE123M	9.133E-02		1.156E-01	1.795E-01	1.831E-02	0.509
SB-124	6.834E-02		1.272E-01	2.064E-01	2.026E-02	0.331
I-125	-1.895E+00		2.356E+00	3.997E+00	5.602E-01	-0.474
SB-125	-3.172E-02		3.227E-01	5.152E-01	5.086E-02	-0.062
SB-126	9.356E-01	+	1.145E+00	1.402E+00	1.300E-01	0.667
SN-126	1.405E+00		3.569E-01	4.703E-01	7.001E-02	2.987
SB-127	1.651E+01		3.090E+01	5.533E+01	5.180E+00	0.298
I-129	-9.486E-02		2.477E-01	4.264E-01	7.929E-02	-0.222
I-131	3.463E-01		1.000E+00	1.634E+00	1.501E-01	0.212
BA-133	2.583E-01		1.525E-01	2.338E-01	3.159E-02	1.105
CS-134	1.480E-01	+	7.972E-02	1.621E-01	1.592E-02	0.913
CS-135	1.203E+00		5.483E-01	8.567E-01	7.198E-02	1.404
CS-136	-3.298E-01		5.748E-01	9.584E-01	9.066E-02	-0.344
CS-137	2.877E-02		1.039E-01	1.668E-01	1.569E-02	0.173
LA-138	4.803E-04		1.642E-01	2.794E-01	2.427E-02	0.002
CE-139	1.975E-02		1.178E-01	1.811E-01	1.799E-02	0.109
BA-140	-1.296E+00		1.472E+00	2.408E+00	8.075E-01	-0.538
LA-140	6.113E-01		5.713E-01	9.378E-01	8.330E-02	0.652
CE-144	-3.396E-02		7.282E-01	1.214E+00	1.355E-01	-0.028
PM-144	-1.816E-02		9.671E-02	1.510E-01	1.411E-02	-0.120
PM-145	1.627E-01		5.013E-01	8.514E-01	5.608E-01	0.191
PM-146	3.251E-01	+	2.906E-01	3.717E-01	3.665E-02	0.875
ND-147	-8.697E-01		3.243E+00	5.681E+00	5.691E-01	-0.153
EU-152	4.463E+00	+	1.151E+00	1.884E+00	2.059E-01	2.369
GD-153	-2.431E-01		3.282E-01	5.434E-01	7.240E-02	-0.447
EU-154	3.454E-01		3.235E-01	5.341E-01	4.895E-02	0.647
EU-155	9.146E-01		3.770E-01	5.656E-01	8.265E-02	1.617
EU-156	-2.741E-01		3.293E+00	5.129E+00	1.175E+00	-0.053
HO-166M	-1.499E-01		2.295E-01	2.710E-01	2.520E-02	-0.553
HF-172	-4.187E-01		6.480E-01	1.070E+00	1.225E-01	-0.391
LU-172	5.732E-01		2.794E+00	4.855E+00	4.647E-01	0.118
LU-173	6.279E-01		4.521E-01	6.983E-01	5.797E-02	0.899
HF-175	-5.544E-02		1.435E-01	2.107E-01	1.884E-02	-0.263
LU-176	1.222E-03		8.268E-02	1.344E-01	1.140E-02	0.009
TA-182	1.526E+01	+	1.911E+00	1.890E+00	1.848E-01	8.071
IR-192	1.780E-01		2.415E-01	3.668E-01	3.637E-02	0.485
HG-203	-2.925E-01		1.594E-01	2.446E-01	2.046E-02	-1.196
BI-207	-4.508E-02		8.162E-02	1.409E-01	1.402E-02	-0.320
BI-210M	1.322E-01		1.835E-01	2.815E-01	2.409E-02	0.470
PB-211	5.672E-01		3.559E+00	5.282E+00	5.054E-01	0.107
RA-223	2.884E-01		2.051E+00	3.338E+00	2.905E-01	0.086
RA-225	-5.793E-01		1.238E+00	1.966E+00	2.346E-01	-0.295
TH-227	1.534E+00		7.957E-01	1.234E+00	1.123E-01	1.243
TH-230	5.470E+00		3.230E+01	4.523E+01	4.572E+00	0.121
PA-231	-3.653E-01		3.496E+00	5.664E+00	4.773E-01	-0.064
TH-231	1.131E+00		1.312E+00	2.263E+00	5.602E-01	0.500

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	-1.646E-01		4.041E-01	6.463E-01	1.449E-01	-0.255
PA-234	3.793E-01		3.605E-01	6.063E-01	6.820E-02	0.626
PA-234M	1.875E+01		1.248E+01	2.258E+01	1.998E+00	0.830
NP-237	2.219E+00		9.150E-01	1.373E+00	2.006E-01	1.617
AM-241	4.669E-01		3.143E-01	4.499E-01	3.705E-02	1.038
AM-243	4.338E+00		5.680E-01	3.650E-01	4.283E-02	11.884
CM-243	-7.397E-01		6.310E-01	9.108E-01	7.423E-02	-0.812

Total number of lines in spectrum 77  
Number of unidentified lines 40  
Number of lines tentatively identified by NID 37 48.05%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.904E+01	1.904E+01	0.292E+01	15.32	
TL-208	1.41E+10Y	1.00	5.748E-01	5.748E-01	1.678E-01	29.19	
PB-210	22.26Y	1.00	2.178E+01	2.183E+01	0.440E+01	20.13	
BI-212	1.41E+10Y	1.00	1.054E+00	1.054E+00	0.984E+00	93.35	
PB-212	1.41E+10Y	1.00	6.583E-01	6.583E-01	1.430E-01	21.72	
BI-214	1602.00Y	1.00	2.769E+01	2.769E+01	0.172E+01	6.22	
PB-214	1602.00Y	1.00	2.896E+01	2.897E+01	0.205E+01	7.09	
RN-219	3.28E+04Y	1.00	2.533E+00	2.533E+00	2.326E+00	91.82	
RA-224	1.41E+10Y	1.00	5.569E+01	5.569E+01	0.617E+01	11.09	
RA-226	1602.00Y	1.00	5.107E+01	5.107E+01	9.370E+01	183.49	
AC-228	1.41E+10Y	1.00	1.245E+00	1.245E+00	0.471E+00	37.84	
TH-234	4.47E+09Y	1.00	1.562E+01	1.562E+01	0.419E+01	26.81	
U-235	7.04E+08Y	1.00	1.825E+00	1.825E+00	2.254E+00	123.51	
Total Activity :			2.277E+02	2.278E+02			

Nuclide Type : FISSION

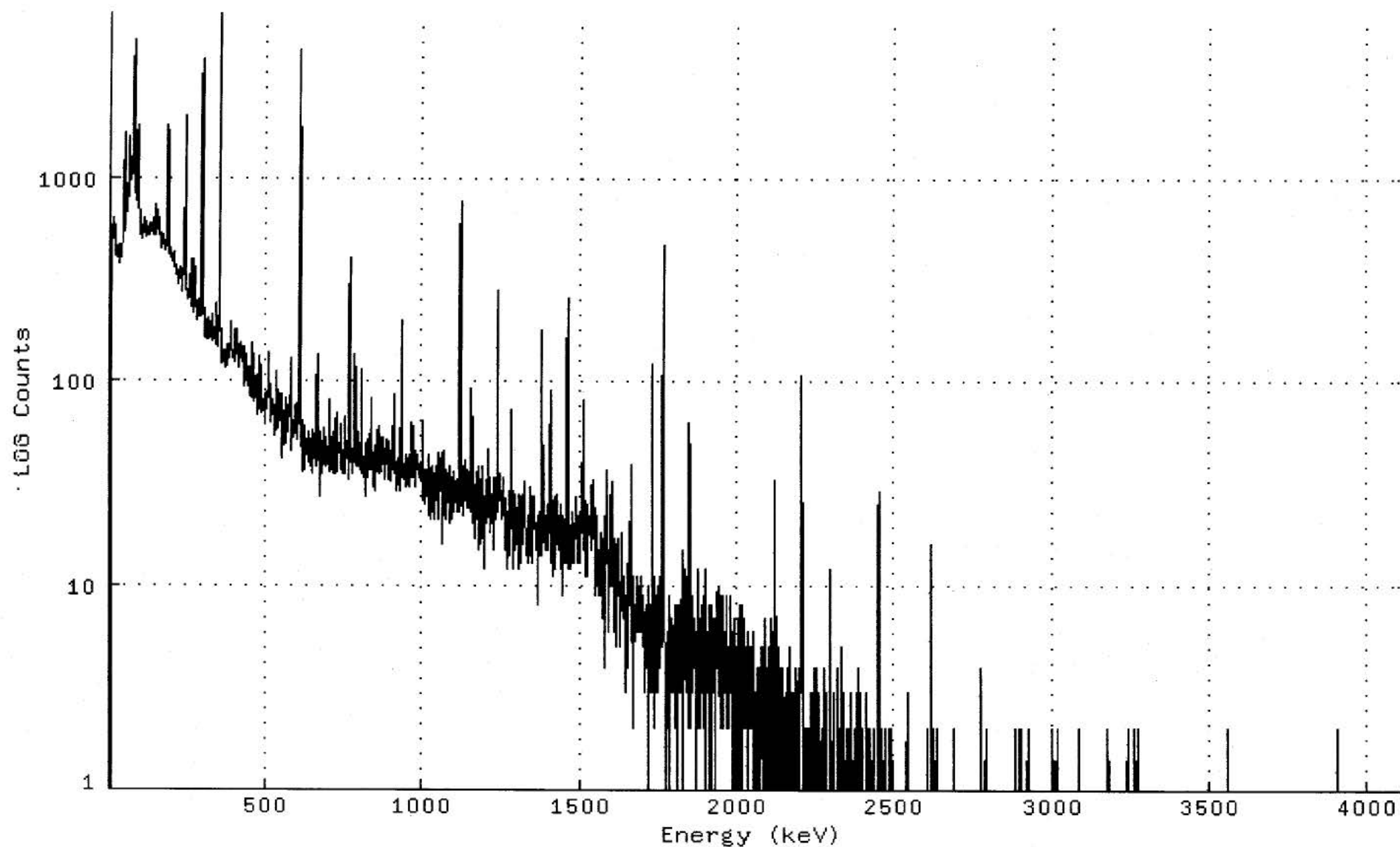
Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RU-106	368.20D	1.05	9.907E-01	1.043E+00	0.973E+00	93.30	
CE-141	32.50D	1.79	4.632E-01	8.294E-01	4.857E-01	58.55	
Total Activity :			1.454E+00	1.872E+00			

Grand Total Activity : 2.292E+02 2.297E+02

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916705\_GE3\_GAS1102\_169777.CNF;1  
Title :  
Sample Title: JB-11-31-110928  
Start Time: 25-OCT-2011 06:55 Sample Time: 28-SEP-2011 00:00 Energy Offset: -2.78447E-01  
Real Time : 0 01:00:45.70 Sample ID : 1109167-05 Energy Slope : 9.99940E-01  
Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00





## Channel

1:	0	0	0	0	0	0	0	0
9:	81	558	585	493	592	540	548	623
17:	541	491	430	434	416	411	399	441
25:	435	419	431	452	390	413	382	462
33:	433	372	415	418	463	460	441	447
41:	489	506	524	534	553	852	1623	574
49:	538	683	662	644	920	888	693	669
57:	681	752	809	890	929	916	1471	1544
65:	966	959	1037	1152	1003	1029	1045	1010
73:	1125	1296	3798	1716	4657	3306	978	1056
81:	1065	877	760	1385	851	793	1658	1667
89:	797	1235	840	882	1788	824	762	605
97:	541	620	601	530	524	497	518	496
105:	570	569	551	543	523	558	569	560
113:	618	567	564	546	527	514	505	519
121:	566	556	535	541	527	510	546	529
129:	526	585	559	555	581	535	548	535
137:	547	528	516	536	528	575	540	728
145:	656	574	575	515	552	550	557	547
153:	599	644	675	574	550	518	519	516
161:	527	478	486	524	481	522	442	458
169:	465	515	494	481	496	469	435	444
177:	474	479	473	481	488	455	500	463
185:	559	1786	1574	472	432	415	438	431
193:	400	423	428	445	447	430	402	408
201:	413	385	405	400	427	427	365	381
209:	358	375	366	341	348	368	331	330
217:	313	298	324	343	300	333	315	316
225:	313	350	360	347	350	325	328	308
233:	272	304	343	419	370	377	693	342
241:	418	1949	1323	278	294	296	266	256
249:	258	256	247	253	265	259	254	297
257:	330	259	392	305	231	259	231	245
265:	216	217	221	226	280	391	311	359
273:	248	229	298	254	227	232	199	218
281:	218	243	230	251	229	227	247	206
289:	230	241	205	231	235	307	2632	3725
297:	397	212	219	236	209	222	205	187
305:	183	197	164	198	182	186	161	170
313:	175	173	200	179	158	186	184	191
321:	166	163	195	174	183	157	161	174
329:	163	198	210	158	181	181	172	170
337:	170	199	239	149	179	185	170	150
345:	182	161	147	157	196	213	814	6357
353:	3664	251	175	177	161	131	125	122
361:	132	139	131	139	124	133	130	135
369:	116	130	127	141	122	128	134	119
377:	143	141	150	151	129	145	138	142
385:	132	145	152	141	191	157	140	141
393:	139	129	135	134	140	131	123	153
401:	132	179	166	155	159	178	137	157
409:	164	146	122	146	145	148	150	115
417:	141	147	142	136	140	154	135	144
425:	147	137	123	138	147	120	119	120

433:	125	93	107	113	122	134	104	101
441:	99	97	103	115	104	93	111	84
449:	93	117	108	103	109	104	154	106
457:	89	88	82	79	85	133	104	119
465:	86	96	82	94	89	103	96	86
473:	68	100	97	96	107	104	73	100
481:	132	95	82	78	83	70	116	119
489:	80	75	79	78	79	71	81	61
497:	85	81	80	79	80	75	74	73
505:	76	74	87	83	83	98	138	126
513:	97	93	68	63	83	74	76	69
521:	79	69	80	70	70	64	64	76
529:	61	54	68	77	57	111	73	64
537:	76	77	67	59	67	73	90	83
545:	68	77	66	64	68	77	86	63
553:	63	54	63	42	68	70	55	71
561:	70	48	76	82	57	61	58	49
569:	63	61	61	75	72	56	76	71
577:	72	70	76	75	93	64	108	128
585:	78	45	64	60	55	59	64	53
593:	75	69	58	76	68	55	53	71
601:	70	55	51	78	61	72	69	209
609:	2425	4158	716	74	79	72	61	47
617:	63	48	47	50	36	64	56	50
625:	50	38	37	57	47	47	44	51
633:	43	48	42	40	54	47	45	56
641:	43	38	52	46	47	41	46	42
649:	41	43	57	35	44	55	47	45
657:	49	43	44	38	42	56	47	52
665:	86	133	87	43	41	47	60	39
673:	27	48	56	45	42	35	50	45
681:	39	37	46	47	39	44	47	58
689:	54	38	39	46	53	40	51	43
697:	39	39	46	42	44	40	67	81
705:	59	42	36	47	45	37	44	53
713:	40	47	35	56	41	47	44	64
721:	65	53	46	45	35	36	61	69
729:	58	48	41	46	46	49	49	48
737:	45	47	41	37	51	44	61	48
745:	43	45	42	45	35	42	35	44
753:	66	51	51	42	45	50	47	48
761:	43	42	49	33	46	65	79	219
769:	400	136	52	47	40	48	41	43
777:	46	37	43	35	44	45	51	42
785:	64	134	99	50	44	45	38	41
793:	44	44	48	38	56	40	49	41
801:	45	49	42	37	38	109	114	65
809:	43	35	37	37	34	39	36	38
817:	47	27	40	40	47	49	37	34
825:	49	50	51	45	42	43	45	45
833:	55	37	42	46	49	44	63	83
841:	43	30	38	35	33	37	44	38
849:	29	46	38	36	48	41	36	57
857:	46	39	43	58	60	39	35	45
865:	44	36	37	53	49	41	53	48
873:	47	51	40	53	39	42	45	43
881:	46	38	33	44	43	48	50	42
889:	51	46	45	39	50	45	33	34
897:	37	45	42	40	32	41	45	44
905:	60	47	58	37	40	42	86	85

913:	58	42	29	38	31	40	30	40
921:	31	37	42	38	39	35	29	42
929:	44	32	35	52	66	168	196	69
937:	34	38	34	36	39	33	39	36
945:	38	32	32	30	43	34	31	34
953:	41	42	31	37	30	38	43	30
961:	41	40	44	52	62	44	34	37
969:	60	50	38	46	34	36	30	38
977:	34	41	45	35	43	42	42	40
985:	41	38	34	36	35	38	39	39
993:	35	36	33	35	40	37	36	39
1001:	60	64	34	36	26	32	34	37
1009:	25	27	30	27	31	31	33	31
1017:	37	34	22	32	43	30	31	30
1025:	21	27	37	26	37	38	23	36
1033:	37	38	31	24	21	33	35	29
1041:	34	30	31	26	38	35	34	33
1049:	30	21	33	42	44	36	29	42
1057:	32	30	32	31	44	32	16	37
1065:	27	22	35	32	25	45	27	37
1073:	26	21	26	25	23	28	33	33
1081:	29	34	35	33	38	27	25	20
1089:	23	31	29	27	21	25	32	34
1097:	32	23	36	29	30	28	31	29
1105:	32	29	28	28	23	24	33	28
1113:	23	24	26	23	25	40	85	457
1121:	752	305	43	31	35	26	22	27
1129:	31	34	38	30	30	41	39	26
1137:	29	27	26	33	24	33	28	37
1145:	25	27	24	35	33	36	30	23
1153:	33	34	69	92	49	20	22	32
1161:	22	30	26	20	25	17	31	22
1169:	28	36	27	21	27	28	20	23
1177:	16	19	15	38	28	27	30	29
1185:	30	16	33	24	24	38	25	17
1193:	27	27	26	27	22	16	12	33
1201:	28	23	23	28	27	27	26	46
1209:	41	26	25	18	27	30	23	34
1217:	19	24	22	28	20	26	26	26
1225:	15	20	31	34	33	30	26	22
1233:	34	21	25	23	70	213	277	114
1241:	33	26	30	26	28	32	35	23
1249:	28	22	22	21	25	34	23	26
1257:	26	22	28	26	24	15	23	21
1265:	24	12	19	23	21	19	16	27
1273:	14	25	28	29	21	20	20	44
1281:	72	54	21	19	28	22	12	19
1289:	24	29	15	28	17	23	20	17
1297:	24	16	19	20	17	21	17	28
1305:	20	12	19	19	24	13	19	16
1313:	17	27	22	21	28	28	16	22
1321:	20	32	28	20	24	21	17	17
1329:	18	16	16	14	19	18	20	13
1337:	17	16	30	23	22	14	14	16
1345:	22	23	21	23	13	27	19	22
1353:	27	20	20	21	18	20	16	20
1361:	15	17	22	21	8	22	20	14
1369:	18	20	22	20	14	14	18	29
1377:	93	178	129	35	14	18	30	28
1385:	45	48	27	18	15	19	18	21

1393:	21	18	16	20	17	15	25	18
1401:	33	61	53	23	20	16	35	79
1409:	90	52	13	20	21	11	26	16
1417:	25	12	19	18	18	13	27	28
1425:	28	19	24	16	17	15	18	18
1433:	21	19	22	12	16	20	21	25
1441:	15	20	16	9	18	22	15	18
1449:	13	17	21	13	16	22	19	19
1457:	19	13	23	104	255	224	64	16
1465:	23	12	17	12	17	19	19	17
1473:	23	17	14	13	22	18	19	19
1481:	13	19	20	15	27	17	17	24
1489:	21	18	21	20	20	13	22	14
1497:	13	23	21	22	21	23	23	18
1505:	18	26	19	28	59	81	53	19
1513:	15	23	21	14	11	15	26	19
1521:	25	11	16	23	21	19	19	22
1529:	18	22	20	20	15	22	21	20
1537:	19	29	33	28	17	26	24	25
1545:	23	16	9	13	17	14	15	10
1553:	16	15	22	15	14	10	11	9
1561:	12	15	11	14	18	9	13	11
1569:	15	17	11	9	7	13	11	17
1577:	4	22	6	7	15	13	37	30
1585:	21	18	15	15	13	6	12	14
1593:	13	15	21	28	10	20	14	32
1601:	10	13	13	11	10	17	6	12
1609:	10	17	10	16	14	5	12	9
1617:	15	10	17	10	9	10	9	9
1625:	5	6	9	10	9	12	18	10
1633:	9	8	8	7	11	8	7	8
1641:	10	10	8	6	8	3	7	7
1649:	5	10	4	13	11	9	9	9
1657:	9	8	8	14	30	39	28	12
1665:	9	7	4	11	7	2	11	4
1673:	7	7	8	6	6	6	7	6
1681:	7	6	11	7	8	7	10	8
1689:	6	7	11	6	7	11	8	10
1697:	7	5	9	6	6	8	7	3
1705:	6	6	5	7	8	8	5	6
1713:	5	4	6	7	10	1	5	8
1721:	5	3	5	8	3	7	3	18
1729:	55	121	96	24	6	7	4	3
1737:	11	2	6	4	8	8	3	3
1745:	8	10	5	4	5	3	8	11
1753:	4	10	5	6	6	6	5	10
1761:	6	9	53	221	463	337	80	11
1769:	7	4	4	1	2	5	2	3
1777:	2	5	3	3	6	6	4	1
1785:	7	7	9	3	5	3	7	6
1793:	6	5	6	4	5	3	5	8
1801:	5	4	4	6	4	1	5	6
1809:	8	5	5	8	3	6	6	3
1817:	4	5	4	4	3	3	5	5
1825:	15	3	6	3	7	1	12	8
1833:	6	6	6	11	3	4	11	11
1841:	8	5	2	4	5	14	41	63
1849:	40	19	5	5	2	3	9	4
1857:	3	7	4	5	7	7	7	4
1865:	5	5	5	3	6	1	4	5

1873:	6	12	8	3	2	6	6	2
1881:	4	7	4	7	3	4	3	6
1889:	5	8	5	9	3	2	3	8
1897:	4	12	5	1	1	4	4	3
1905:	4	6	5	5	6	8	0	4
1913:	6	1	5	1	6	2	7	7
1921:	8	6	5	5	5	3	4	4
1929:	5	1	4	3	6	8	4	5
1937:	6	7	9	10	5	4	8	4
1945:	4	2	4	9	9	6	4	5
1953:	5	9	4	5	2	5	5	6
1961:	3	5	5	2	2	9	3	5
1969:	4	5	5	5	2	4	3	7
1977:	6	9	6	3	3	3	5	1
1985:	6	2	3	1	3	5	4	7
1993:	3	5	4	4	4	3	1	4
2001:	5	1	2	1	5	7	2	4
2009:	4	1	4	8	0	2	1	1
2017:	4	8	4	3	7	2	3	3
2025:	3	5	5	5	2	5	2	0
2033:	6	1	4	6	3	2	3	5
2041:	2	3	2	3	5	4	3	4
2049:	2	2	1	3	6	0	2	3
2057:	3	1	0	1	2	1	3	3
2065:	4	0	4	3	3	3	2	0
2073:	5	5	5	4	2	2	1	1
2081:	3	2	5	1	4	3	2	0
2089:	7	1	1	2	2	4	2	1
2097:	0	3	1	3	2	4	5	3
2105:	2	7	4	3	1	4	3	3
2113:	6	3	1	1	5	15	33	21
2121:	10	5	4	2	1	2	2	1
2129:	0	1	5	3	3	1	2	0
2137:	2	4	2	2	2	1	1	0
2145:	4	2	2	1	1	0	0	2
2153:	2	2	3	2	0	1	2	3
2161:	4	3	3	1	2	1	1	4
2169:	5	1	0	1	1	3	1	0
2177:	3	0	2	1	1	1	2	3
2185:	2	0	3	4	3	0	2	1
2193:	3	3	3	3	4	3	0	3
2201:	3	7	29	82	107	65	10	7
2209:	2	3	2	0	2	2	1	2
2217:	2	2	1	1	2	2	1	1
2225:	1	2	0	2	1	0	2	1
2233:	0	3	3	1	2	1	3	1
2241:	1	1	4	0	0	0	0	1
2249:	0	0	4	0	0	0	3	0
2257:	1	2	2	3	0	1	0	1
2265:	1	1	2	0	1	2	2	1
2273:	1	2	1	1	4	4	1	0
2281:	3	2	2	0	0	1	0	1
2289:	1	0	1	1	5	12	4	3
2297:	1	1	0	1	0	0	1	3
2305:	1	2	1	1	1	1	0	1
2313:	1	1	0	0	1	1	2	4
2321:	0	1	1	1	1	2	1	1
2329:	0	1	0	5	0	1	0	2
2337:	0	3	0	0	1	0	1	1
2345:	0	2	1	2	2	1	0	1

2353:	1	0	1	2	0	0	1	1
2361:	3	2	0	1	1	1	1	0
2369:	0	1	2	1	2	1	1	0
2377:	3	0	1	1	0	0	1	1
2385:	0	0	0	4	1	2	1	3
2393:	0	2	2	1	0	0	1	1
2401:	0	0	0	0	0	0	0	1
2409:	0	3	0	0	1	1	2	1
2417:	0	0	0	0	0	1	2	0
2425:	1	0	1	0	0	0	2	0
2433:	1	0	0	0	0	1	1	1
2441:	1	1	0	0	1	2	12	22
2449:	29	14	7	1	0	0	0	1
2457:	0	0	0	2	0	0	0	0
2465:	0	0	0	2	2	0	1	1
2473:	0	1	0	0	0	0	0	0
2481:	2	0	0	2	1	0	0	0
2489:	0	0	2	0	1	0	1	0
2497:	0	0	0	1	0	1	0	1
2505:	0	0	1	0	0	1	1	1
2513:	1	1	1	0	0	0	0	0
2521:	0	0	0	1	0	1	0	0
2529:	0	1	0	0	0	0	1	0
2537:	0	1	0	3	0	0	1	0
2545:	0	0	0	0	0	0	0	0
2553:	0	0	0	0	0	0	0	0
2561:	0	0	0	0	0	0	0	0
2569:	0	0	0	0	1	1	0	0
2577:	0	1	0	1	0	0	0	0
2585:	0	1	1	0	0	1	0	1
2593:	0	1	0	0	0	0	0	0
2601:	0	2	0	0	0	0	1	1
2609:	1	1	0	0	1	6	16	14
2617:	9	1	0	0	1	0	2	1
2625:	0	0	0	0	0	0	2	0
2633:	0	1	0	0	0	1	0	0
2641:	0	0	0	0	0	0	1	0
2649:	0	0	0	0	0	0	1	0
2657:	0	1	0	0	0	0	0	0
2665:	0	1	0	1	0	1	0	1
2673:	1	0	0	1	0	0	0	0
2681:	0	0	0	1	0	0	0	0
2689:	1	2	1	0	1	0	0	1
2697:	0	0	0	0	0	0	0	0
2705:	0	0	0	0	1	0	0	0
2713:	0	0	1	0	0	0	1	0
2721:	0	0	0	0	0	0	0	0
2729:	0	0	0	0	0	0	0	0
2737:	0	0	0	0	0	0	1	0
2745:	0	0	0	1	0	1	0	0
2753:	0	0	1	1	0	0	1	0
2761:	0	1	1	1	0	0	0	0
2769:	1	1	1	4	0	0	0	0
2777:	0	0	1	1	0	0	0	0
2785:	0	0	0	0	2	0	0	0
2793:	1	0	0	0	0	0	0	0
2801:	0	0	0	0	1	1	0	0
2809:	0	1	1	0	0	0	0	0
2817:	0	0	0	0	0	1	0	0
2825:	0	0	0	0	0	0	1	0

2833:	0	0	0	0	0	0	0	0
2841:	0	0	0	0	0	0	0	0
2849:	0	0	0	0	0	0	0	0
2857:	0	0	1	1	0	0	0	0
2865:	0	0	0	0	0	0	0	1
2873:	1	0	1	0	0	0	0	0
2881:	2	1	1	0	0	0	0	1
2889:	0	1	1	0	2	0	0	0
2897:	0	0	0	0	0	2	0	0
2905:	0	0	0	0	0	0	1	0
2913:	1	0	1	0	0	0	0	0
2921:	1	0	2	1	0	0	1	0
2929:	0	0	0	1	1	0	0	0
2937:	0	0	0	1	0	1	0	1
2945:	0	0	0	1	0	0	0	0
2953:	0	0	0	1	0	0	0	1
2961:	0	0	0	0	0	0	0	0
2969:	0	1	0	0	0	0	0	1
2977:	0	0	0	0	0	0	0	0
2985:	0	0	0	0	1	0	1	0
2993:	0	0	0	0	0	0	0	2
3001:	0	0	0	0	0	0	0	0
3009:	0	0	1	0	0	2	0	0
3017:	0	0	0	1	0	1	0	0
3025:	0	0	0	0	0	0	0	0
3033:	0	0	0	1	1	1	0	0
3041:	1	0	0	0	1	0	1	0
3049:	0	0	0	0	0	1	0	0
3057:	0	0	0	0	0	0	0	0
3065:	0	0	0	0	0	0	0	0
3073:	0	0	0	0	0	0	0	0
3081:	2	0	0	0	0	0	0	0
3089:	0	0	0	1	0	0	0	0
3097:	0	0	0	0	0	0	0	0
3105:	0	0	0	0	0	0	0	1
3113:	0	0	0	0	0	0	0	0
3121:	0	0	0	0	1	1	0	0
3129:	0	1	0	0	0	0	0	0
3137:	0	0	0	0	0	0	1	0
3145:	0	0	0	0	0	0	0	0
3153:	0	1	0	0	0	0	0	0
3161:	0	0	0	0	0	1	0	0
3169:	0	0	0	0	0	0	1	2
3177:	0	0	0	0	0	1	0	0
3185:	0	0	0	0	0	0	0	0
3193:	0	0	0	0	0	0	0	0
3201:	1	0	0	0	0	0	0	0
3209:	0	1	0	0	0	1	0	0
3217:	0	0	0	0	0	0	0	0
3225:	0	0	0	0	0	1	1	0
3233:	0	0	0	0	1	2	0	0
3241:	0	0	0	0	0	0	0	0
3249:	0	0	0	0	0	0	1	0
3257:	0	0	0	0	2	0	0	0
3265:	0	0	0	0	0	0	0	2
3273:	0	0	1	0	1	1	0	0
3281:	0	0	0	0	0	1	0	0
3289:	0	1	0	0	0	0	0	0
3297:	0	0	0	0	0	0	0	0
3305:	0	0	0	0	0	0	0	0

3313:	0	0	0	0	0	0	0	1
3321:	0	0	0	1	1	0	0	0
3329:	0	0	0	1	0	0	0	1
3337:	0	0	0	0	1	0	1	0
3345:	0	0	0	0	0	0	0	0
3353:	0	0	0	0	0	0	0	0
3361:	0	0	0	0	0	1	0	0
3369:	0	0	0	0	0	0	0	0
3377:	0	0	0	0	0	0	1	0
3385:	0	0	1	0	0	0	0	1
3393:	0	0	0	0	0	0	0	0
3401:	0	0	0	1	0	0	0	0
3409:	0	0	0	0	1	0	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	0	1	0	0	0
3433:	0	0	0	0	0	0	0	0
3441:	0	0	1	1	1	0	1	0
3449:	0	0	0	0	0	0	0	1
3457:	0	0	0	0	0	0	0	0
3465:	0	0	0	0	0	1	1	0
3473:	0	0	0	0	0	0	0	0
3481:	0	0	0	0	0	0	0	0
3489:	0	0	0	0	0	0	1	0
3497:	0	0	0	0	0	0	0	0
3505:	0	0	0	0	0	0	1	0
3513:	1	0	1	0	0	1	0	0
3521:	0	0	0	0	0	0	0	1
3529:	0	0	0	0	0	0	1	0
3537:	0	0	0	0	0	0	0	0
3545:	0	1	0	1	0	0	0	0
3553:	0	0	0	2	0	0	0	1
3561:	1	0	0	0	0	0	0	0
3569:	0	1	0	1	0	0	0	0
3577:	0	0	0	0	0	0	0	0
3585:	0	0	0	0	0	1	0	0
3593:	0	0	0	0	0	0	0	0
3601:	1	0	0	0	1	0	0	0
3609:	0	0	0	0	0	0	0	1
3617:	0	0	0	0	0	0	0	0
3625:	1	1	0	0	0	0	1	0
3633:	1	0	0	0	0	0	0	0
3641:	0	0	0	0	0	0	0	0
3649:	0	0	1	0	0	0	0	0
3657:	0	0	0	0	0	0	0	0
3665:	0	0	0	0	0	0	0	0
3673:	0	0	0	1	0	0	0	0
3681:	0	0	0	0	0	0	0	0
3689:	0	0	0	0	0	0	0	0
3697:	0	0	1	0	0	0	0	0
3705:	0	1	0	0	0	0	0	0
3713:	1	0	0	0	0	1	0	0
3721:	0	0	0	0	0	0	0	0
3729:	0	0	0	0	0	0	0	0
3737:	0	0	0	0	0	0	0	0
3745:	0	0	0	0	0	0	0	0
3753:	0	0	0	0	1	1	0	0
3761:	0	1	0	0	0	0	0	0
3769:	0	0	0	0	0	1	0	0
3777:	0	0	1	0	0	0	0	0
3785:	0	0	0	0	0	0	0	0



3793:	0	0	0	0	0	0	0	0
3801:	0	0	0	0	0	0	0	0
3809:	0	0	1	0	0	0	0	0
3817:	0	0	0	0	1	1	0	1
3825:	0	0	0	0	0	0	0	0
3833:	0	0	0	0	0	0	0	0
3841:	0	0	0	0	0	0	0	0
3849:	1	0	0	0	0	0	0	0
3857:	0	0	0	0	0	1	0	0
3865:	0	0	0	1	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	1	0	0	1	0	1	0	0
3889:	0	0	0	0	0	0	0	0
3897:	0	1	0	0	2	0	0	1
3905:	0	0	0	0	0	0	0	0
3913:	0	0	0	0	0	0	1	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	0	0	0	1	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0
3953:	1	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	0	0	0	0	0	0	0
3985:	0	0	1	1	0	0	0	0
3993:	0	0	0	1	0	0	1	1
4001:	0	0	1	0	0	0	0	0
4009:	1	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	1	0	0	0
4033:	0	0	0	0	1	0	0	0
4041:	0	0	0	0	0	0	0	0
4049:	0	0	0	0	0	0	1	1
4057:	0	0	0	0	0	0	0	0
4065:	0	0	1	0	0	0	0	0
4073:	0	0	1	0	0	0	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	1	0	0	0	0	0	0

Sample ID : 1109167-06

Page : 1  
Acquisition date : 25-OCT-2011 07:43:34

VAX/VMS Peak Search Report Generated 25-OCT-2011 08:44:14.99

*10/25/11*

Configuration : DKA100: [GAMMA.SCUSR.ARCHIVE] SMP\_110916706\_GE1\_GAS1102\_169779.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : JB-30-31-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 07:43:34  
 Sample ID : 1109167-06 Sample Quantity : 5.69870E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE1 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.63 0.0%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	46.51*	144	989	1.56	46.14	41	9	81.7		PB-210
1	63.51*	268	762	1.53	63.14	60	23	34.5	5.36E+01	TH-234
1	69.37	63	615	1.40	69.00	60	23	117.3		
1	75.51*	732	779	1.56	75.14	60	23	15.8		AM-243
0	88.04	205	888	1.17	87.67	86	5	45.6		SN-126
										CD-109
0	92.99*	172	1040	1.61	92.62	90	7	67.4		
0	171.90	84	502	4.15	171.55	169	7	90.8		
0	186.33*	310	630	1.41	185.98	182	7	29.8		RA-226
0	209.72	100	438	1.69	209.38	207	7	72.1		
1	238.88*	672	366	2.13	238.55	234	16	11.7	7.13E+00	PB-212
1	242.37	373	269	1.63	242.04	234	16	17.7		RA-224
0	260.05	61	276	3.60	259.72	257	6	90.0		
2	295.53*	725	197	1.54	295.21	291	13	9.6	1.77E+00	PB-214
2	300.16	59	244	1.99	299.83	291	13	88.1		PB-212
0	325.23	66	339	6.53	324.91	320	11	110.7		RA-223
0	337.95	153	329	1.51	337.63	333	10	47.3		AC-228
0	352.19*	1298	357	1.46	351.88	347	10	7.8		PB-214
0	377.64	42	194	1.54	377.34	374		8119.7		
0	462.95	39	137	1.89	462.66	460		7105.7		
0	469.36	26	95	1.32	469.07	467		6124.1		
0	510.71*	83	202	2.20	510.43	505	12	76.4		
1	580.08	35	59	2.01	579.82	577	11	86.4	2.22E+00	
1	583.45*	197	57	2.01	583.18	577	11	20.2		TL-208
3	609.49*	981	64	1.63	609.23	604	12	6.9	2.26E+00	BI-214
3	613.26	26	64	1.85	613.00	604		12172.9		
0	727.79	31	102	1.20	727.55	724		8119.3		BI-212
0	768.08	106	112	2.14	767.86	764	9	40.8		
0	807.18	25	68	1.00	806.96	803		8121.1		
0	840.02	39	103	2.59	839.81	835		12111.1		
0	880.53	19	47	2.45	880.33	878		6125.6		
0	895.81	17	36	1.70	895.61	894		5118.3		
0	911.08	151	86	1.67	910.88	907	9	27.2		AC-228
0	933.80	32	81	1.18	933.61	931	7	99.8		
0	951.25	22	30	2.76	951.06	949	5	85.3		
0	969.06	82	123	2.05	968.88	965	9	54.3		AC-228

AG  
10/25/11

0136

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	1033.95	28	34	4.30	1033.78	1031	7	77.3		
0	1071.41	26	47	2.95	1071.25	1067		9102.8		
0	1120.30	202	96	2.16	1120.15	1114	12	24.0		BI-214
0	1237.14	64	121	1.95	1237.01	1233	11	70.7		
0	1280.92	38	42	1.39	1280.80	1277	8	67.8		
3	1374.82	10	8	2.90	1374.72	1373	10	85.5	9.72E+00	
3	1378.10	53	22	2.18	1378.00	1373	10	40.2		
1	1401.14	30	16	2.41	1401.05	1394	19	56.0	1.29E+00	
1	1408.31	29	10	2.41	1408.22	1394	19	57.3		
1	1460.86*	784	13	2.43	1460.78	1456	21	7.3	9.40E+00	K-40
1	1470.30	13	4	2.44	1470.22	1456		21100.1		
0	1511.90	52	48	2.92	1511.83	1504	22	71.3		
0	1540.41	24	16	6.12	1540.35	1535	11	76.0		
0	1548.78	9	9	3.09	1548.72	1546		7132.8		
0	1575.97	12	3	2.82	1575.91	1574	5	72.0		
0	1588.81	21	15	2.12	1588.76	1586	8	74.5		
0	1663.10	29	6	3.78	1663.06	1657	15	54.0		
0	1729.57	33	5	2.71	1729.54	1726	9	42.5		
0	1764.16*	178	19	2.78	1764.14	1757	15	18.6		BI-214
0	1799.81	7	5	1.66	1799.80	1796		6134.1		
1	1847.23	31	10	2.57	1847.23	1843	12	50.0	3.34E+00	
1	1850.23	12	9	2.57	1850.23	1843		12131.1		
0	1955.58	4	2	1.26	1955.60	1950		7150.5		
0	2101.09	20	3	7.37	2101.15	2096	11	55.0		
0	2203.80	37	7	2.19	2203.88	2199	9	41.3		BI-214
0	2424.48	5	0	1.70	2424.60	2422	5	89.4		
0	2447.24	6	4	2.89	2447.37	2443		8141.4		
0	2613.81*	70	0	2.41	2613.97	2609	10	25.1		TL-208

Total number of lines in spectrum 63  
Number of unidentified lines 33  
Number of lines tentatively identified by NID 30 47.62%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.925E+01	1.925E+01	0.228E+01	11.87	
TL-208	1.41E+10Y	1.00	7.803E-01	7.803E-01	1.358E-01	17.41	
PB-210	22.26Y	1.00	1.789E+00	1.793E+00	1.472E+00	82.13	
BI-212	1.41E+10Y	1.00	3.996E-01	3.996E-01	4.785E-01	119.75	
PB-212	1.41E+10Y	1.00	9.983E-01	9.983E-01	1.462E-01	14.64	
BI-214	1602.00Y	1.00	2.889E+00	2.889E+00	0.275E+00	9.52	
PB-214	1602.00Y	1.00	2.939E+00	2.939E+00	0.262E+00	8.90	
RA-223	3.28E+04Y	1.00	1.379E+00	1.379E+00	1.532E+00	111.04	
RA-224	1.41E+10Y	1.00	6.266E+00	6.266E+00	1.247E+00	19.90	
RA-226	1602.00Y	1.00	5.394E+00	5.395E+00	10.01E+00	185.56	
AC-228	1.41E+10Y	1.00	1.015E+00	1.015E+00	0.228E+00	22.49	
TH-234	4.47E+09Y	1.00	3.218E+00	3.218E+00	1.142E+00	35.50	
Total Activity :			4.632E+01	4.632E+01			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	2.475E+00	2.578E+00	1.217E+00	47.22	
SN-126	1.00E+05Y	1.00	2.487E-01	2.487E-01	1.165E-01	46.83	
Total Activity :			2.724E+00	2.827E+00			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
AM-243	7380.00Y	1.00	4.974E-01	4.974E-01	0.914E-01	18.37	
Total Activity :			4.974E-01	4.974E-01			

Grand Total Activity : 4.954E+01 4.965E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr 2-Sigma			Status
				pCi/GRAM	pCi/GRAM	%Error	
K-40	1460.81	10.67*	5.027E-01	1.925E+01	1.925E+01	11.87	OK
Final Mean for 1 Valid Peaks = 1.925E+01+/- 2.285E+00 ( 11.87%)							
TL-208	583.14	30.22*	1.029E+00	8.369E-01	8.369E-01	22.54	OK
	860.37	4.48	7.505E-01	-----	Line Not Found	-----	Absent
	2614.66	35.85	3.563E-01	7.193E-01	7.193E-01	27.22	OK
Final Mean for 2 Valid Peaks = 7.803E-01+/- 1.358E-01 ( 17.41%)							
PB-210	46.50	4.05*	2.613E+00	1.789E+00	1.793E+00	82.13	OK
Final Mean for 1 Valid Peaks = 1.793E+00+/- 1.472E+00 ( 82.13%)							
BI-212	727.17	11.80*	8.597E-01	3.996E-01	3.996E-01	119.75	OK
	1620.62	2.75	4.684E-01	-----	Line Not Found	-----	Absent
Final Mean for 1 Valid Peaks = 3.996E-01+/- 4.785E-01 (119.75%)							
PB-212	238.63	44.60*	2.000E+00	9.932E-01	9.932E-01	14.83	OK
	300.09	3.41	1.716E+00	1.324E+00	1.324E+00	88.53	OK
Final Mean for 2 Valid Peaks = 9.983E-01+/- 1.462E-01 ( 14.64%)							
BI-214	609.31	46.30*	9.927E-01	2.811E+00	2.811E+00	12.25	OK
	1120.29	15.10	6.104E-01	2.887E+00	2.887E+00	25.64	OK
	1764.49	15.80	4.432E-01	3.349E+00	3.349E+00	20.63	OK
	2204.22	4.98	3.885E-01	2.537E+00	2.537E+00	42.42	OK
Final Mean for 4 Valid Peaks = 2.889E+00+/- 2.751E-01 ( 9.52%)							
PB-214	295.21	19.19	1.736E+00	2.865E+00	2.865E+00	13.19	OK
	351.92	37.19*	1.529E+00	3.007E+00	3.007E+00	12.06	OK
Final Mean for 2 Valid Peaks = 2.939E+00+/- 2.617E-01 ( 8.90%)							
RA-223	323.87	3.88*	1.626E+00	1.379E+00	1.379E+00	111.04	OK
Final Mean for 1 Valid Peaks = 1.379E+00+/- 1.532E+00 (111.04%)							
RA-224	240.98	3.95*	1.987E+00	6.266E+00	6.266E+00	19.90	OK
Final Mean for 1 Valid Peaks = 6.266E+00+/- 1.247E+00 ( 19.90%)							
RA-226	186.21	3.28*	2.308E+00	5.394E+00	5.395E+00	185.56	OK
Final Mean for 1 Valid Peaks = 5.395E+00+/- 1.001E+01 (185.56%)							
AC-228	338.32	11.40	1.575E+00	1.120E+00	1.120E+00	48.16	OK

Sample ID : 1109167-06

Acquisition date : 25-OCT-2011 07:43:34

## Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
	911.07	27.70*	7.170E-01	1.005E+00	1.005E+00	28.62	OK
	969.11	16.60	6.829E-01	9.515E-01	9.515E-01	55.01	OK

Final Mean for 3 Valid Peaks = 1.015E+00+/- 2.283E-01 ( 22.49%)

TH-234	63.29	3.80*	2.884E+00	3.218E+00	3.218E+00	35.50	OK
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Final Mean for 1 Valid Peaks = 3.218E+00+/- 1.142E+00 ( 35.50%)

## Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CD-109	88.03	3.72*	2.931E+00	2.475E+00	2.578E+00	47.22	OK

Final Mean for 1 Valid Peaks = 2.578E+00+/- 1.217E+00 ( 47.22%)

SN-126	87.57	37.00*	2.932E+00	2.487E-01	2.487E-01	46.83	OK
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Final Mean for 1 Valid Peaks = 2.487E-01+/- 1.165E-01 ( 46.83%)

## Nuclide Type: ACTIVATION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
AM-243	74.67	66.00*	2.939E+00	4.974E-01	4.974E-01	18.37	OK

Final Mean for 1 Valid Peaks = 4.974E-01+/- 9.140E-02 ( 18.37%)

Flag: "\*" = Keyline

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	1.925E+01	2.285E+00	6.037E-01	5.119E-02	31.891
CD-109	2.578E+00	1.217E+00	1.641E+00	1.906E-01	1.571
SN-126	2.487E-01	1.165E-01	1.608E-01	1.598E-02	1.547
TL-208	7.803E-01	1.358E-01	1.791E-01	1.656E-02	4.357
PB-210	1.793E+00	1.472E+00	1.268E+00	9.785E-02	1.414
BI-212	3.996E-01	4.785E-01	5.216E-01	4.767E-02	0.766
PB-212	9.983E-01	1.462E-01	1.226E-01	1.004E-02	8.141
BI-214	2.889E+00	2.751E-01	1.326E-01	1.233E-02	21.787
PB-214	2.939E+00	2.617E-01	1.472E-01	1.217E-02	19.966
RA-223	1.379E+00	1.532E+00	1.318E+00	1.087E-01	1.047
RA-224	6.266E+00	1.247E+00	1.394E+00	1.141E-01	4.495
RA-226	5.395E+00	1.001E+01	1.676E+00	3.069E+00	3.218
AC-228	1.015E+00	2.283E-01	2.464E-01	1.958E-02	4.120
TH-234	3.218E+00	1.142E+00	1.553E+00	1.150E-01	2.072
AM-243	4.974E-01	9.140E-02	8.830E-02	7.515E-03	5.633

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.637E-01		4.613E-01	8.049E-01	7.097E-02	0.203
NA-22	9.976E-04		4.878E-02	7.703E-02	6.304E-03	0.013
AL-26	-4.580E-03		2.430E-02	4.445E-02	3.550E-03	-0.103
TI-44	3.005E-02	+	3.534E-02	6.419E-02	5.029E-03	0.468
SC-46	1.904E-02		5.549E-02	8.480E-02	6.787E-03	0.225
V-48	-7.614E-02		1.257E-01	2.096E-01	1.694E-02	-0.363
CR-51	-2.793E-01		7.063E-01	1.019E+00	8.881E-02	-0.274
MN-54	4.305E-02		4.647E-02	8.043E-02	6.824E-03	0.535
CO-56	1.256E-02		4.881E-02	8.054E-02	6.756E-03	0.156
CO-57	4.196E-03		3.762E-02	6.209E-02	5.993E-03	0.068
CO-58	9.323E-03		5.090E-02	8.311E-02	7.220E-03	0.112
FE-59	-4.076E-02		1.132E-01	1.927E-01	1.718E-02	-0.212
CO-60	1.532E-02		5.397E-02	9.585E-02	7.836E-03	0.160
ZN-65	4.581E-03		1.103E-01	1.735E-01	1.422E-02	0.026
SE-75	-4.865E-02		7.014E-02	9.973E-02	8.189E-03	-0.488
RB-82	3.022E-02		6.622E-01	1.060E+00	9.420E-02	0.029
RB-83	7.707E-02		9.274E-02	1.585E-01	2.515E-02	0.486
KR-85	1.659E+01		8.744E+00	1.672E+01	1.506E+00	0.992
SR-85	9.666E-02		5.096E-02	9.743E-02	8.775E-03	0.992
Y-88	1.105E-02		3.128E-02	6.386E-02	5.073E-03	0.173
NB-93M	-3.269E+00		8.621E-01	9.876E-02	2.198E-02	-33.098
NB-94	-1.824E-02		4.034E-02	6.859E-02	5.607E-03	-0.266
NB-95	1.698E-01		8.402E-02	1.522E-01	1.363E-02	1.115
NB-95M	5.354E+01		3.039E+01	4.857E+01	3.977E+00	1.102
ZR-95	2.402E-02		9.474E-02	1.707E-01	1.680E-02	0.141
RU-103	3.144E-02		5.698E-02	1.049E-01	1.505E-02	0.300
RU-106	-1.086E-01		3.398E-01	5.933E-01	8.198E-02	-0.183
AG-108M	-1.167E-04		4.574E-02	7.278E-02	6.664E-03	-0.002

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AG-110M	-3.464E-02		4.178E-02	6.959E-02	6.499E-03	-0.498
SN-113	4.795E-03		5.545E-02	9.963E-02	8.454E-03	0.048
TE123M	-2.634E-02		4.678E-02	7.471E-02	6.185E-03	-0.353
SB-124	6.051E-04		5.393E-02	8.631E-02	8.019E-03	0.007
I-125	-3.110E-01		6.645E-01	1.104E+00	1.002E-01	-0.282
SB-125	-9.779E-02		1.126E-01	1.911E-01	1.655E-02	-0.512
SB-126	5.974E-02		3.479E-01	5.638E-01	5.168E-02	0.106
SB-127	-2.686E+00		1.321E+01	2.319E+01	2.153E+00	-0.116
I-129	-3.052E-02		6.492E-02	1.081E-01	1.135E-02	-0.282
I-131	-1.835E-03		3.808E-01	6.823E-01	5.637E-02	-0.003
BA-133	1.594E-01		6.363E-02	1.104E-01	1.433E-02	1.444
CS-134	-1.435E-02		4.209E-02	6.510E-02	6.063E-03	-0.220
CS-135	1.404E-01		2.215E-01	3.679E-01	2.994E-02	0.382
CS-136	-1.585E-02		2.269E-01	3.975E-01	3.349E-02	-0.040
CS-137	2.093E-02		4.880E-02	8.817E-02	8.247E-03	0.237
LA-138	-2.399E-02		6.132E-02	1.033E-01	8.492E-03	-0.232
CE-139	1.095E-02		4.940E-02	7.508E-02	6.001E-03	0.146
BA-140	1.702E-01		5.769E-01	1.044E+00	3.472E-01	0.163
LA-140	7.909E-02		1.849E-01	3.216E-01	2.639E-02	0.246
CE-141	1.028E-02		1.254E-01	2.046E-01	4.828E-02	0.050
CE-144	-2.629E-03		3.067E-01	5.028E-01	4.647E-02	-0.005
PM-144	-3.588E-02		3.973E-02	6.555E-02	6.070E-03	-0.547
PM-145	-4.206E-02		1.438E-01	2.362E-01	1.538E-01	-0.178
PM-146	6.748E-02		8.250E-02	1.531E-01	1.327E-02	0.441
ND-147	-4.437E-01		1.398E+00	2.445E+00	2.220E-01	-0.182
EU-152	4.994E-01	+	2.916E-01	5.788E-01	6.129E-02	0.863
GD-153	-6.029E-02		1.440E-01	2.341E-01	2.290E-02	-0.258
EU-154	1.556E-03		1.353E-01	2.134E-01	1.746E-02	0.007
EU-155	3.084E-01		1.477E-01	2.097E-01	2.058E-02	1.471
EU-156	1.285E-01		1.323E+00	2.136E+00	4.882E-01	0.060
HO-166M	-1.350E-02		6.710E-02	1.175E-01	1.081E-02	-0.115
HF-172	-1.911E-01		2.773E-01	4.434E-01	4.219E-02	-0.431
LU-172	4.733E-01		1.190E+00	2.169E+00	1.774E-01	0.218
LU-173	1.289E-01		1.756E-01	2.927E-01	2.378E-02	0.441
HF-175	1.500E-02		6.548E-02	8.656E-02	7.158E-03	0.173
LU-176	4.094E-03		3.612E-02	5.425E-02	4.451E-03	0.075
TA-182	1.475E+00	+	3.783E-01	5.523E-01	4.521E-02	2.671
IR-192	7.627E-02	+	9.492E-02	1.507E-01	1.320E-02	0.506
HG-203	4.960E-03		6.811E-02	1.104E-01	9.230E-03	0.045
BI-207	-1.381E-03		3.322E-02	5.919E-02	5.453E-03	-0.023
BI-210M	6.038E-02		7.594E-02	1.187E-01	9.681E-03	0.509
PB-211	2.372E-01		1.158E+00	2.082E+00	1.731E-01	0.114
RN-219	9.544E-02		4.977E-01	8.960E-01	7.428E-02	0.107
RA-225	2.267E-01		3.711E-01	5.947E-01	4.977E-02	0.381
TH-227	1.030E+00		3.683E-01	6.003E-01	4.916E-02	1.716
TH-230	5.208E+00		9.775E+00	1.639E+01	1.280E+00	0.318
PA-231	1.257E+00		1.584E+00	2.469E+00	2.023E-01	0.509
TH-231	-1.124E-01		3.367E-01	5.635E-01	6.888E-02	-0.199



----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	-1.052E-02		1.659E-01	2.677E-01	5.969E-02	-0.039
PA-234	1.611E-01		1.512E-01	2.557E-01	2.384E-02	0.630
PA-234M	-9.242E-01		4.620E+00	8.115E+00	6.577E-01	-0.114
U-235	2.372E-02		3.197E-01	5.217E-01	9.199E-02	0.045
NP-237	7.485E-01		3.584E-01	5.088E-01	4.994E-02	1.471
AM-241	4.728E-02		9.896E-02	1.548E-01	1.097E-02	0.305
CM-243	1.177E-01		2.446E-01	4.046E-01	3.279E-02	0.291

Total number of lines in spectrum 63  
Number of unidentified lines 33  
Number of lines tentatively identified by NID 30 47.62%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.925E+01	1.925E+01	0.228E+01	11.87	
TL-208	1.41E+10Y	1.00	7.803E-01	7.803E-01	1.358E-01	17.41	
PB-210	22.26Y	1.00	1.789E+00	1.793E+00	1.472E+00	82.13	
BI-212	1.41E+10Y	1.00	3.996E-01	3.996E-01	4.785E-01	119.75	
PB-212	1.41E+10Y	1.00	9.983E-01	9.983E-01	1.462E-01	14.64	
BI-214	1602.00Y	1.00	2.889E+00	2.889E+00	0.275E+00	9.52	
PB-214	1602.00Y	1.00	2.939E+00	2.939E+00	0.262E+00	8.90	
RA-223	3.28E+04Y	1.00	1.379E+00	1.379E+00	1.532E+00	111.04	
RA-224	1.41E+10Y	1.00	6.266E+00	6.266E+00	1.247E+00	19.90	
RA-226	1602.00Y	1.00	5.394E+00	5.395E+00	10.01E+00	185.56	
AC-228	1.41E+10Y	1.00	1.015E+00	1.015E+00	0.228E+00	22.49	
TH-234	4.47E+09Y	1.00	3.218E+00	3.218E+00	1.142E+00	35.50	
Total Activity :			4.632E+01	4.632E+01			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	2.475E+00	2.578E+00	1.217E+00	47.22	
SN-126	1.00E+05Y	1.00	2.487E-01	2.487E-01	1.165E-01	46.83	
Total Activity :			2.724E+00	2.827E+00			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
AM-243	7380.00Y	1.00	4.974E-01	4.974E-01	0.914E-01	18.37	
Total Activity :			4.974E-01	4.974E-01			

Grand Total Activity : 4.954E+01 4.965E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916706\_GE1\_GAS1102\_169779.CNF;1

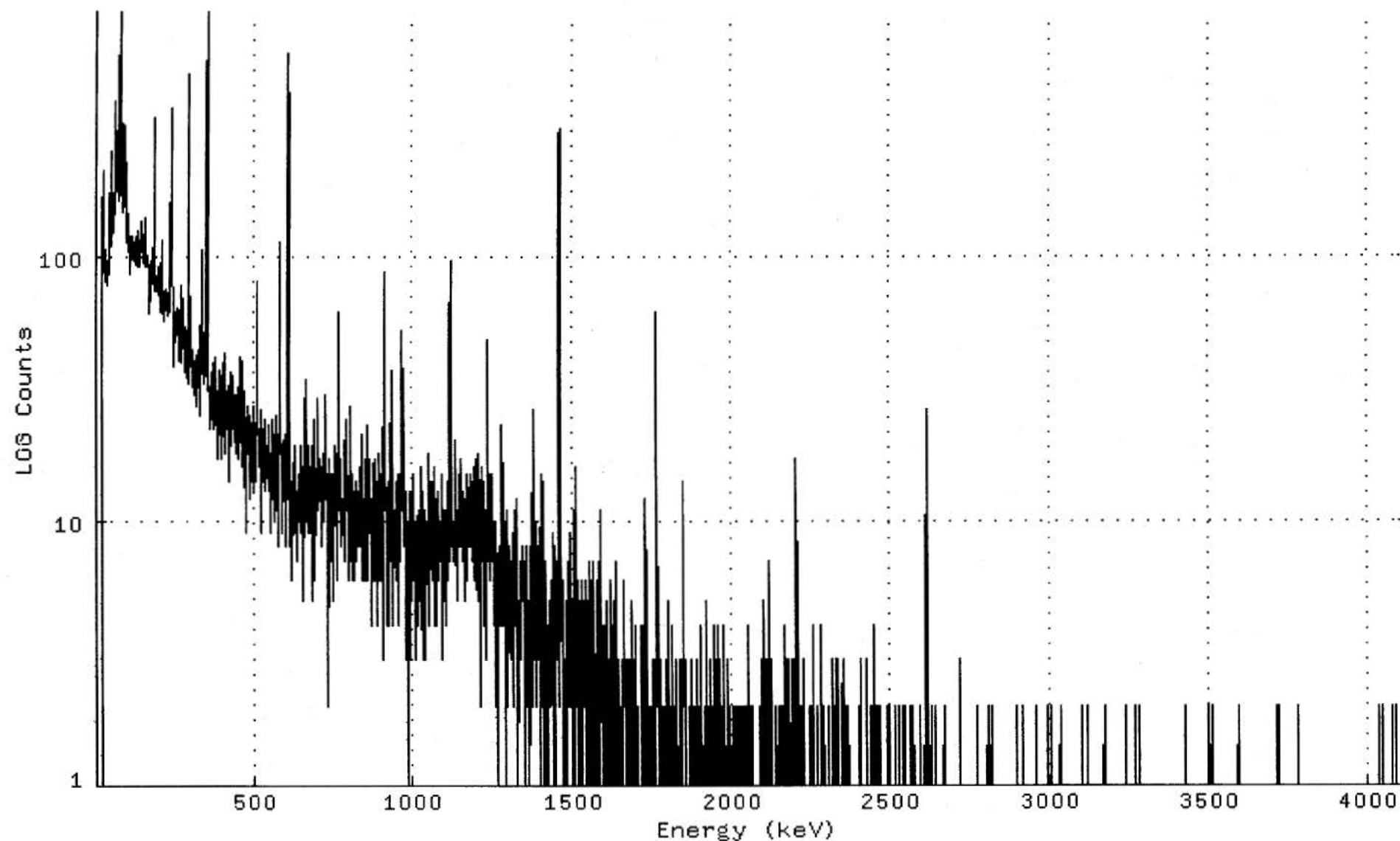
Title :

Sample Title: JB-30-31-110928

Start Time: 25-OCT-2011 07:43 Sample Time: 28-SEP-2011 00:00 Energy Offset: 3.84457E-01

Real Time : 0 01:00:01.63 Sample ID : 1109167-06 Energy Slope : 9.99792E-01

Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00



## Channel Contents for DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916706\_GE1\_GAS1102\_1697

## Channel

1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0
17:	0	1	86	133	148	188	211	150
25:	118	86	99	83	80	105	83	94
33:	80	95	77	80	87	94	90	90
41:	102	107	85	104	122	248	187	123
49:	108	138	124	123	160	173	121	149
57:	144	160	159	144	153	189	383	229
65:	186	190	199	176	196	162	199	190
73:	222	326	571	362	843	364	185	173
81:	192	147	170	218	155	156	314	219
89:	172	232	153	248	310	160	130	120
97:	112	122	123	143	111	104	105	112
105:	127	97	102	112	114	117	85	108
113:	117	99	107	97	114	113	107	103
121:	96	109	111	116	94	96	92	100
129:	112	123	96	116	110	103	91	90
137:	92	97	115	95	112	103	107	135
145:	113	105	111	120	109	108	104	94
153:	104	139	102	98	97	115	90	95
161:	96	95	91	96	100	87	89	60
169:	72	88	83	95	91	83	74	78
177:	67	89	92	80	102	106	88	93
185:	172	329	142	73	83	84	76	78
193:	84	73	81	79	86	89	74	71
201:	88	93	84	80	79	67	61	79
209:	115	88	67	68	60	63	56	73
217:	61	62	66	68	66	70	66	74
225:	63	59	72	64	59	69	60	72
233:	61	70	66	88	85	298	361	110
241:	160	299	108	54	73	52	55	47
249:	38	61	55	51	50	53	47	58
257:	50	62	63	61	61	40	41	53
265:	40	50	62	53	66	77	70	54
273:	39	69	56	45	63	50	53	54
281:	46	36	45	38	36	36	47	52
289:	36	41	35	33	48	98	482	246
297:	59	45	47	70	54	40	38	44
305:	38	38	36	32	34	39	30	37
313:	36	40	36	42	37	32	33	27
321:	35	42	44	41	33	32	33	55
329:	38	25	38	32	28	45	44	40
337:	40	105	69	38	35	38	33	38
345:	37	38	35	38	39	57	360	823
353:	185	56	37	39	31	30	29	25
361:	24	32	22	31	24	36	34	26
369:	32	39	22	31	24	24	29	31
377:	33	41	23	32	23	26	24	26
385:	17	31	31	27	30	27	24	21
393:	37	34	23	32	22	26	17	25
401:	39	32	30	38	33	28	35	24
409:	39	43	18	29	31	30	22	27
417:	22	29	32	17	14	27	29	36
425:	24	30	19	19	28	26	26	35

433:	25	26	22	27	22	23	28	30
441:	20	19	21	30	18	19	18	21
449:	24	22	17	22	25	41	25	25
457:	22	22	20	19	24	25	40	34
465:	16	17	22	21	19	31	19	9
473:	18	19	20	20	23	26	23	27
481:	27	18	22	20	23	12	25	14
489:	21	14	20	15	17	17	20	27
497:	20	20	16	18	13	22	20	16
505:	14	21	17	32	31	52	79	48
513:	27	16	22	16	21	16	20	20
521:	26	15	17	13	9	21	22	20
529:	18	15	17	13	24	23	23	17
537:	18	16	19	17	18	15	16	13
545:	18	23	19	20	17	18	12	15
553:	9	15	12	12	14	16	16	15
561:	24	12	10	18	12	12	21	11
569:	17	14	11	25	18	18	18	8
577:	12	19	16	28	18	48	113	76
585:	20	19	9	9	15	11	13	13
593:	12	18	12	20	17	8	18	12
601:	21	17	19	12	16	19	15	126
609:	582	290	45	12	24	18	8	13
617:	12	13	14	14	6	13	11	16
625:	14	13	16	17	17	10	14	9
633:	19	7	13	11	9	12	11	14
641:	10	13	14	15	13	11	9	19
649:	12	12	11	13	14	6	6	16
657:	5	15	22	13	29	23	16	21
665:	34	24	13	10	19	11	11	9
673:	19	12	11	9	12	11	11	11
681:	16	14	11	19	5	12	14	9
689:	12	14	14	24	6	13	13	11
697:	11	14	14	18	13	16	29	15
705:	11	14	16	16	13	14	17	8
713:	11	13	9	16	10	12	18	15
721:	12	10	13	12	18	14	17	30
729:	14	13	15	11	13	9	2	11
737:	14	11	7	8	17	7	15	10
745:	10	10	12	5	13	10	8	14
753:	15	14	16	11	19	13	10	9
761:	13	18	6	13	12	11	29	61
769:	52	16	11	13	17	14	12	8
777:	11	12	11	10	12	10	11	7
785:	20	15	7	17	18	14	14	13
793:	11	16	24	9	7	8	6	10
801:	10	7	10	11	8	27	9	7
809:	15	6	11	10	9	9	8	8
817:	11	13	6	14	12	7	7	11
825:	12	8	10	11	8	9	13	12
833:	16	8	14	15	16	11	21	8
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849:	10	9	6	9	17	14	6	6
857:	14	14	16	20	23	13	9	9
865:	14	11	10	12	4	11	12	11
873:	10	14	12	13	11	6	16	17
881:	13	8	6	9	9	9	12	10
889:	8	4	14	8	6	6	18	15
897:	8	6	10	15	9	8	7	13
905:	5	7	3	13	13	39	86	41

913:	11	16	15	12	9	9	11	4
921:	8	5	4	4	11	8	14	7
929:	11	11	11	14	15	37	16	8
937:	12	12	4	11	7	11	10	9
945:	11	11	14	6	9	13	11	15
953:	4	6	10	8	10	8	7	8
961:	10	11	14	16	19	18	11	43
969:	52	27	10	11	14	8	8	8
977:	3	13	6	5	3	10	9	1
985:	9	10	9	11	11	6	10	3
993:	13	11	6	10	13	7	5	7
1001:	15	12	10	7	7	8	10	9
1009:	7	3	8	4	8	10	8	5
1017:	10	11	6	10	7	9	5	9
1025:	6	4	9	16	5	3	6	13
1033:	9	11	12	8	3	7	9	9
1041:	11	9	7	6	9	8	8	4
1049:	11	12	8	18	6	7	9	9
1057:	14	11	11	9	6	8	14	7
1065:	7	5	6	9	4	16	6	12
1073:	9	7	4	6	8	8	7	6
1081:	13	11	6	9	9	10	7	10
1089:	9	10	14	6	3	9	15	8
1097:	8	7	9	5	7	5	7	4
1105:	11	10	8	14	10	11	6	9
1113:	9	7	7	14	9	9	47	96
1121:	66	15	9	11	8	8	9	7
1129:	10	9	8	7	14	20	9	8
1137:	9	5	7	7	5	11	6	15
1145:	9	10	8	10	10	8	13	9
1153:	10	12	17	10	8	10	8	13
1161:	7	8	12	5	12	7	12	11
1169:	8	6	12	12	15	12	12	9
1177:	12	8	12	8	13	8	13	15
1185:	9	7	9	14	7	10	8	16
1193:	8	12	7	14	6	17	8	7
1201:	6	10	6	5	8	6	18	9
1209:	9	13	7	8	10	2	13	16
1217:	11	10	10	12	7	8	7	8
1225:	4	14	10	3	11	11	7	7
1233:	9	8	7	21	30	48	25	7
1241:	6	9	15	12	6	9	15	7
1249:	10	8	12	7	8	6	8	10
1257:	4	10	8	7	5	6	2	7
1265:	1	3	7	5	7	8	4	7
1273:	6	8	6	4	6	6	13	8
1281:	23	12	8	4	7	11	7	8
1289:	9	5	1	10	8	6	8	7
1297:	11	7	2	5	4	4	5	8
1305:	4	7	7	5	3	5	4	4
1313:	6	2	4	9	4	4	8	11
1321:	4	5	5	10	4	12	2	5
1329:	1	3	5	5	5	3	2	7
1337:	6	7	4	3	4	6	6	8
1345:	7	6	6	7	1	3	3	3
1353:	6	3	5	2	4	3	8	2
1361:	5	2	2	3	1	2	8	3
1369:	2	3	5	3	2	7	2	7
1377:	23	26	5	4	8	3	4	2
1385:	10	3	3	4	3	5	8	6

1393:	3	3	7	6	4	1	4	6
1401:	15	11	3	2	2	5	6	14
1409:	7	10	1	1	1	4	7	2
1417:	1	3	4	2	3	0	3	3
1425:	4	5	5	5	4	2	3	3
1433:	6	4	4	4	1	5	3	9
1441:	3	8	5	1	5	4	8	4
1449:	4	7	3	6	6	5	4	2
1457:	11	11	73	280	301	102	12	9
1465:	7	4	3	1	2	6	1	4
1473:	2	3	2	0	1	3	1	3
1481:	5	4	2	4	6	3	3	2
1489:	7	4	4	5	5	2	9	5
1497:	0	0	5	2	1	2	2	0
1505:	3	6	4	11	10	16	4	2
1513:	6	3	4	2	3	6	5	1
1521:	2	4	1	5	2	4	0	4
1529:	2	4	6	3	4	2	2	4
1537:	4	5	3	4	6	5	6	1
1545:	0	2	5	2	5	1	3	0
1553:	3	3	1	7	0	6	1	4
1561:	4	2	7	0	1	1	2	5
1569:	2	2	2	2	0	1	5	4
1577:	4	0	1	6	2	5	5	7
1585:	3	0	8	11	6	2	5	3
1593:	1	3	4	4	3	4	4	2
1601:	2	4	1	2	2	1	5	2
1609:	0	3	0	3	2	1	1	3
1617:	1	3	6	6	4	5	2	3
1625:	1	4	0	2	2	4	5	3
1633:	1	3	2	1	3	3	2	7
1641:	0	2	3	1	1	0	0	1
1649:	1	2	0	2	0	3	3	1
1657:	1	0	4	6	4	6	2	3
1665:	3	1	1	2	1	1	0	0
1673:	1	2	2	3	2	3	1	2
1681:	1	0	5	3	1	0	1	1
1689:	1	0	3	3	3	0	2	0
1697:	0	0	4	1	2	0	2	1
1705:	1	1	0	1	1	0	1	1
1713:	0	4	2	3	0	2	2	1
1721:	4	2	2	2	0	0	1	6
1729:	11	12	5	2	1	0	2	2
1737:	1	2	2	1	0	2	1	2
1745:	2	0	0	0	0	0	1	1
1753:	1	3	1	1	1	3	2	2
1761:	2	10	37	61	57	15	3	3
1769:	1	2	2	1	0	0	1	3
1777:	2	3	1	2	1	2	1	1
1785:	2	1	2	2	2	0	1	1
1793:	0	1	3	1	2	1	5	3
1801:	0	0	0	2	0	1	2	1
1809:	1	1	0	1	4	1	0	1
1817:	0	0	2	1	1	0	0	1
1825:	3	2	0	0	0	1	1	1
1833:	0	1	2	0	3	2	2	2
1841:	1	2	1	3	2	5	14	6
1849:	4	6	1	3	1	0	2	1
1857:	1	1	0	1	0	0	1	0
1865:	2	1	0	0	1	1	0	3

1873:	1	3	0	2	1	2	2	0
1881:	0	1	1	0	2	0	2	1
1889:	3	1	2	0	2	1	1	1
1897:	1	0	4	1	1	1	1	0
1905:	0	1	0	0	1	1	2	0
1913:	2	1	2	1	0	5	2	3
1921:	2	2	1	2	2	1	1	2
1929:	0	0	3	1	2	1	0	1
1937:	1	2	0	1	2	0	1	4
1945:	1	2	1	3	1	0	0	0
1953:	1	4	1	0	0	2	3	0
1961:	0	1	0	0	1	2	0	2
1969:	2	1	0	4	0	1	0	0
1977:	0	1	0	0	0	0	2	0
1985:	3	1	2	1	0	0	1	2
1993:	0	2	0	1	0	1	1	1
2001:	1	2	1	0	1	1	1	1
2009:	1	2	1	1	0	0	1	2
2017:	1	0	1	1	2	1	2	1
2025:	2	0	0	2	0	1	2	0
2033:	0	1	0	0	0	2	1	2
2041:	0	0	2	1	1	1	1	1
2049:	2	4	1	1	1	0	0	2
2057:	0	2	1	2	1	2	1	1
2065:	1	0	1	1	0	1	0	0
2073:	0	0	0	0	1	0	0	0
2081:	0	1	1	1	0	1	2	1
2089:	1	1	0	3	1	1	0	0
2097:	3	1	1	3	5	3	2	3
2105:	2	0	1	0	0	1	3	2
2113:	1	0	1	1	2	7	3	1
2121:	2	0	3	0	0	0	1	0
2129:	0	0	0	0	1	1	2	0
2137:	1	2	0	0	1	0	0	1
2145:	0	1	0	2	1	0	1	1
2153:	0	2	0	0	2	0	1	1
2161:	1	1	0	1	0	4	1	1
2169:	1	2	1	1	3	3	1	1
2177:	1	1	1	3	0	1	1	1
2185:	1	1	1	2	3	0	2	1
2193:	0	3	2	1	1	1	1	0
2201:	0	5	17	14	5	2	0	1
2209:	0	0	0	0	0	0	2	2
2217:	1	2	1	1	1	2	1	2
2225:	3	1	1	0	1	0	0	1
2233:	1	0	0	1	0	0	1	0
2241:	1	0	0	1	0	2	0	1
2249:	0	1	0	2	1	2	1	1
2257:	4	0	1	1	0	0	0	0
2265:	1	2	0	1	1	1	1	1
2273:	0	1	0	1	0	2	0	0
2281:	4	1	0	2	0	2	1	2
2289:	1	0	1	1	0	0	0	0
2297:	0	1	1	1	0	0	0	2
2305:	2	1	0	1	1	1	0	1
2313:	0	3	3	1	1	0	1	1
2321:	2	1	0	0	1	1	1	0
2329:	3	2	2	1	3	1	0	0
2337:	0	1	0	1	0	0	1	0
2345:	1	0	0	2	3	0	3	2



2353:	1	1	2	1	1	2	2	1
2361:	0	1	0	1	0	2	1	1
2369:	0	0	0	1	1	1	1	1
2377:	1	0	1	1	1	0	1	0
2385:	0	0	1	1	1	1	1	0
2393:	0	0	0	1	1	0	0	2
2401:	0	0	0	1	0	0	3	0
2409:	0	0	0	0	1	1	0	0
2417:	0	1	1	0	0	0	0	2
2425:	3	0	0	0	1	0	1	1
2433:	0	0	1	1	1	2	0	0
2441:	2	0	0	1	0	3	1	4
2449:	1	0	2	0	1	1	1	1
2457:	1	2	0	0	1	0	1	1
2465:	0	0	2	0	0	0	0	1
2473:	0	1	0	0	0	1	0	1
2481:	1	0	1	0	0	1	0	0
2489:	0	0	2	1	0	2	2	1
2497:	0	0	0	0	1	0	0	0
2505:	0	0	1	0	0	1	1	0
2513:	1	2	0	1	0	0	0	0
2521:	1	0	1	2	0	1	0	0
2529:	0	1	0	0	1	0	0	2
2537:	1	1	0	1	0	0	0	0
2545:	2	0	0	0	0	0	0	0
2553:	0	1	1	0	0	1	1	0
2561:	0	2	0	1	0	0	1	1
2569:	0	2	0	1	0	0	0	0
2577:	0	0	0	1	0	1	0	0
2585:	0	0	0	0	1	2	1	0
2593:	0	1	0	0	0	0	0	0
2601:	1	0	0	1	0	0	2	0
2609:	0	1	0	5	22	26	12	8
2617:	2	0	0	0	1	0	1	0
2625:	2	0	0	1	1	0	1	0
2633:	0	0	0	0	0	0	1	2
2641:	1	0	0	0	1	0	0	0
2649:	0	0	0	0	0	0	0	0
2657:	0	0	0	1	0	0	0	0
2665:	0	0	2	0	0	0	0	0
2673:	0	0	0	0	1	0	1	0
2681:	0	1	0	0	0	0	1	1
2689:	0	1	0	0	0	0	1	0
2697:	0	0	1	1	0	1	0	0
2705:	0	0	0	0	0	0	0	1
2713:	0	0	0	0	0	3	0	0
2721:	0	0	0	0	0	0	1	0
2729:	0	0	0	0	0	0	1	1
2737:	0	0	0	0	0	0	0	0
2745:	1	1	0	0	1	0	0	1
2753:	0	0	0	0	0	0	0	0
2761:	1	0	0	0	0	0	0	0
2769:	0	2	0	0	0	0	0	1
2777:	0	0	0	1	0	0	1	0
2785:	0	0	0	1	0	0	0	0
2793:	0	0	0	0	0	0	0	0
2801:	1	1	1	2	0	1	1	0
2809:	1	1	0	0	0	1	0	2
2817:	1	0	0	0	1	1	0	0
2825:	0	0	0	1	0	0	0	0

2833:	1	0	0	0	1	0	0	1
2841:	0	1	0	0	0	0	0	0
2849:	0	1	0	0	0	0	0	0
2857:	0	0	0	0	0	0	0	0
2865:	1	0	0	0	0	0	0	0
2873:	1	0	0	0	0	0	0	0
2881:	0	0	0	0	0	1	0	1
2889:	0	0	1	0	0	0	2	0
2897:	0	0	1	0	1	1	0	0
2905:	0	0	1	0	0	0	0	0
2913:	0	0	2	0	0	0	0	0
2921:	0	0	1	1	0	0	0	1
2929:	0	0	0	0	1	0	0	0
2937:	1	0	0	0	1	0	0	0
2945:	0	0	0	0	0	0	0	0
2953:	0	0	0	2	1	0	0	0
2961:	0	0	0	0	0	0	1	0
2969:	0	0	0	0	0	0	0	0
2977:	0	0	0	0	0	0	1	1
2985:	0	0	1	0	1	1	2	0
2993:	1	1	0	0	0	0	1	0
3001:	0	1	0	0	1	2	0	0
3009:	0	0	0	1	0	0	0	0
3017:	0	0	0	0	0	0	0	0
3025:	0	0	0	0	0	0	0	2
3033:	0	1	0	0	0	0	1	0
3041:	0	0	0	0	0	0	0	1
3049:	0	0	0	1	0	0	0	0
3057:	0	0	0	1	0	0	1	0
3065:	0	0	0	0	0	0	1	0
3073:	0	0	1	0	0	1	0	0
3081:	0	0	0	0	0	0	0	0
3089:	0	1	0	0	0	0	0	0
3097:	1	0	0	2	1	0	0	0
3105:	0	1	1	0	0	0	0	1
3113:	0	0	0	0	1	0	0	2
3121:	0	0	0	0	0	0	0	0
3129:	0	0	0	0	0	0	0	1
3137:	1	1	0	1	0	0	0	0
3145:	0	1	1	0	0	0	0	1
3153:	0	0	0	0	0	1	1	0
3161:	0	0	0	0	0	0	0	0
3169:	0	2	0	0	0	1	0	0
3177:	0	0	0	0	0	0	0	1
3185:	0	0	0	0	0	0	0	1
3193:	1	0	1	0	0	1	0	0
3201:	0	0	0	0	0	0	0	1
3209:	0	0	0	0	0	1	0	0
3217:	0	0	0	0	0	0	0	0
3225:	0	0	0	0	0	0	1	0
3233:	0	0	0	1	2	1	0	1
3241:	0	0	0	0	0	0	0	0
3249:	0	0	0	0	0	0	0	1
3257:	0	0	0	0	1	0	0	0
3265:	0	0	1	2	1	0	0	0
3273:	1	0	1	0	0	0	0	0
3281:	2	1	1	1	0	0	0	0
3289:	0	0	0	0	0	0	0	0
3297:	0	0	0	0	0	0	0	0
3305:	0	1	0	0	0	0	0	0

3313:	0	0	0	0	0	0	0	0
3321:	0	1	0	0	0	0	0	0
3329:	0	0	0	0	0	0	0	0
3337:	1	0	0	0	0	1	0	0
3345:	0	0	0	0	0	0	0	0
3353:	0	0	0	0	0	0	0	0
3361:	0	0	0	0	0	0	0	0
3369:	0	0	0	0	0	0	0	0
3377:	0	1	0	1	0	1	0	1
3385:	1	0	0	0	0	0	0	0
3393:	0	0	0	0	0	0	0	0
3401:	0	0	1	0	0	0	1	0
3409:	0	0	0	0	0	1	0	1
3417:	0	0	1	0	0	0	0	0
3425:	1	2	0	0	0	0	0	0
3433:	1	0	1	0	0	0	0	0
3441:	0	0	0	0	0	0	0	0
3449:	0	0	0	0	0	0	0	0
3457:	0	0	0	0	0	0	0	0
3465:	0	0	0	0	0	0	0	0
3473:	0	0	0	0	0	0	0	0
3481:	0	1	1	0	0	0	0	0
3489:	1	1	0	0	0	0	0	0
3497:	0	0	2	0	0	0	0	0
3505:	0	0	2	0	0	1	0	0
3513:	0	0	0	0	0	0	0	0
3521:	0	0	0	0	0	0	0	0
3529:	0	0	0	0	0	0	1	0
3537:	0	0	0	0	0	0	0	0
3545:	0	0	0	0	0	0	0	0
3553:	0	0	0	0	0	0	0	0
3561:	0	1	1	1	0	1	0	1
3569:	0	0	0	0	1	1	0	0
3577:	0	0	1	0	1	0	0	0
3585:	0	0	0	0	0	2	0	0
3593:	0	0	0	0	0	1	0	0
3601:	0	0	0	1	0	0	1	0
3609:	0	0	0	0	0	0	0	0
3617:	0	0	0	1	1	0	1	0
3625:	1	0	0	0	0	1	0	0
3633:	0	1	0	0	0	1	0	0
3641:	1	0	0	1	0	0	0	1
3649:	0	1	0	0	0	0	0	0
3657:	0	0	0	1	0	0	1	0
3665:	0	0	0	0	1	0	0	0
3673:	0	0	0	0	1	0	1	0
3681:	0	0	0	0	0	1	0	0
3689:	0	0	0	0	0	0	0	0
3697:	0	0	0	0	1	0	0	0
3705:	0	0	0	0	0	0	0	2
3713:	0	0	0	2	1	0	0	0
3721:	0	0	0	0	0	0	0	0
3729:	1	0	0	0	0	0	1	0
3737:	0	0	0	0	0	0	0	0
3745:	0	0	0	0	0	0	0	0
3753:	1	0	0	0	0	0	0	0
3761:	0	0	1	1	0	1	0	0
3769:	1	0	0	1	0	0	0	0
3777:	0	0	0	2	0	0	0	0
3785:	0	0	0	0	0	0	0	0

3793:	1	0	0	0	0	0	0	0
3801:	0	0	0	0	0	0	0	1
3809:	0	0	1	0	0	0	0	0
3817:	0	0	0	0	0	0	0	0
3825:	0	1	0	0	0	1	1	0
3833:	0	0	0	1	0	0	0	0
3841:	0	0	0	0	0	1	0	0
3849:	0	0	0	0	0	0	0	0
3857:	0	1	0	0	0	0	0	1
3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	0	1	0	0	0
3881:	0	0	0	1	0	0	0	0
3889:	1	0	0	0	0	1	0	0
3897:	0	0	1	0	0	0	0	0
3905:	1	0	0	0	1	1	0	0
3913:	0	0	0	1	0	0	0	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	1	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	1	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	0
3969:	0	0	0	0	0	0	0	1
3977:	1	0	0	0	1	0	1	0
3985:	0	0	0	0	0	0	0	0
3993:	0	0	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	1	0	0	0	0
4017:	0	0	1	0	0	0	0	1
4025:	0	0	0	0	0	2	1	1
4033:	0	0	0	0	0	0	0	0
4041:	0	0	2	0	0	0	0	0
4049:	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	1	0	0
4065:	0	0	0	0	1	1	2	0
4073:	1	0	0	1	1	0	0	0
4081:	0	0	2	0	0	0	0	0
4089:	0	0	1	1	0	0	0	0

Sample ID : 1109167-07

Page : 1  
Acquisition date : 25-OCT-2011 07:44:57

VAX/VMS Peak Search Report Generated 25-OCT-2011 08:45:35.18

10/25/11

Configuration : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916707\_GE2\_GAS1102\_169780.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : JB-41-31-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 07:44:57  
 Sample ID : 1109167-07 Sample Quantity : 5.48030E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE2 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.37 0.0%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	63.07*	143	797	1.66	63.03	60	6	65.6		TH-234
0	76.37*	1348	1054	3.23	76.33	72	8	10.0		
1	84.17	54	518	1.47	84.13	82	20	116.4	4.89E+00	
1	87.17	235	486	1.48	87.13	82	20	29.6		NP-237 SN-126 CD-109 ND-147
1	89.90	185	452	1.48	89.87	82	20	36.6		
0	129.08	112	537	2.08	129.06	126	7	71.1		
0	186.01*	292	705	1.43	186.01	181	10	36.8		RA-226
0	204.74	51	361	1.72	204.75	202		6121.5		
4	238.53*	606	265	1.60	238.55	235	11	11.6	1.37E+01	PB-212
4	242.10*	313	306	1.90	242.12	235	11	23.9		RA-224
0	258.44	66	332	2.61	258.47	254		9103.5		
0	269.70	121	322	2.30	269.73	265	10	58.3		CS-135
0	276.24	45	261	2.03	276.27	275		7122.8		
0	294.98*	528	240	1.31	295.02	291	7	13.2		PB-214
0	300.42	41	207	1.45	300.46	299		6116.7		PB-212
0	327.59	72	235	1.58	327.64	324	8	77.0		
0	337.43*	117	292	1.67	337.49	332	10	58.1		AC-228
0	351.78*	898	248	1.42	351.85	347	10	9.5		PB-214
0	365.76	40	156	2.99	365.83	362		8114.7		I-131
0	408.68	57	159	2.60	408.77	405	8	81.7		
0	463.25	54	129	1.23	463.36	460	7	74.4		
3	506.25	24	31	2.15	506.37	505	12	62.4	8.68E-01	
0	530.48	66	144	4.65	530.61	524	14	80.5		ND-147
0	582.83*	181	113	1.47	582.98	579	8	25.7		
0	608.86*	667	128	1.58	609.02	604	10	10.1		BI-214
2	665.22	29	51	2.29	665.40	658	22	98.5	1.07E+00	
0	719.35	34	91	3.84	719.55	714		11115.6		
0	726.88*	51	68	1.73	727.08	724	8	62.8		BI-212
0	770.10	80	147	2.24	770.32	764	17	74.4		
0	805.67	29	42	2.73	805.90	802	7	81.8		
0	837.56	31	90	2.93	837.81	832		10120.0		
0	910.64	148	60	2.06	910.91	907	9	25.3		AC-228
2	926.55	16	43	2.47	926.83	920		18152.4	3.01E+00	
2	933.29	39	55	2.48	933.57	920	18	67.3		

AG

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It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
1	963.50	41	50	2.27	963.79	958	15	66.0	1.44E+00	
1	968.50*	78	51	2.27	968.79	958	15	38.1		AC-228
0	1085.06	26	53	2.88	1085.39	1080	11	116.5		
0	1093.77	35	36	6.28	1094.11	1090	9	70.5		
0	1119.79*	146	91	2.05	1120.14	1114	12	31.1		BI-214
0	1154.77	35	38	3.84	1155.13	1151	8	69.5		
0	1238.20	43	85	2.16	1238.59	1234	9	84.0		
1	1327.79	14	11	2.47	1328.22	1326	12	91.6	2.61E+00	
0	1376.90	41	34	3.32	1377.35	1373	9	60.5		
0	1404.73	86	7	7.17	1405.19	1398	15	25.6		
0	1459.87*	753	33	2.69	1460.35	1455	13	8.0		K-40
0	1508.93	53	9	3.50	1509.43	1504	12	35.3		
3	1587.45	17	20	2.85	1587.98	1583	14	106.9	1.21E+00	
3	1591.25	15	15	3.14	1591.78	1583	14	118.1		
0	1622.08	15	7	6.68	1622.62	1617	10	84.1		BI-212
0	1659.72	22	2	5.49	1660.27	1656	10	50.0		
1	1724.62	7	0	2.92	1725.20	1724	13	64.6	8.76E-01	
1	1728.19	26	3	2.40	1728.77	1724	13	47.0		
0	1763.34*	161	12	2.32	1763.93	1758	12	18.2		BI-214
0	1846.08	26	2	2.71	1846.70	1843	7	42.5		
0	1873.87	14	6	4.17	1874.51	1869	9	87.6		
0	1911.72	10	7	5.05	1912.37	1906	11	125.6		
0	1936.52	8	3	2.92	1937.18	1934	8	105.4		
0	2086.05	10	4	1.53	2086.76	2082	9	98.2		
0	2116.19	12	0	3.16	2116.92	2113	8	57.7		
0	2201.77	21	2	1.95	2202.52	2198	8	49.0		
0	2233.56	6	3	2.06	2234.33	2231	6	116.0		
0	2446.77	7	4	1.18	2447.62	2442	8	126.2		
0	2612.35*	56	6	2.48	2613.26	2608	11	33.2		

Total number of lines in spectrum 63  
Number of unidentified lines 29  
Number of lines tentatively identified by NID 34 53.97%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr	2-Sigma	Flags
			Uncorrected	Decay Corr			
			pCi/GRAM	pCi/GRAM	2-Sigma Error	%Error	
K-40	1.28E+09Y	1.00	2.111E+01	2.111E+01	0.287E+01	13.60	
BI-212	1.41E+10Y	1.00	8.654E-01	8.654E-01	4.646E-01	53.69	
PB-212	1.41E+10Y	1.00	1.025E+00	1.025E+00	0.150E+00	14.63	
BI-214	1602.00Y	1.00	2.408E+00	2.408E+00	0.269E+00	11.17	
PB-214	1602.00Y	1.00	2.394E+00	2.394E+00	0.248E+00	10.35	
RA-224	1.41E+10Y	1.00	6.005E+00	6.005E+00	1.535E+00	25.56	
RA-226	1602.00Y	1.00	5.807E+00	5.807E+00	10.85E+00	186.80	
AC-228	1.41E+10Y	1.00	1.088E+00	1.088E+00	0.228E+00	20.92	
TH-234	4.47E+09Y	1.00	2.046E+00	2.046E+00	1.355E+00	66.24	
Total Activity :			4.275E+01	4.275E+01			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr	2-Sigma	Flags
			Uncorrected	Decay Corr			
			pCi/GRAM	pCi/GRAM	2-Sigma Error	%Error	
CD-109	464.00D	1.04	3.312E+00	3.451E+00	1.160E+00	33.62	
SN-126	1.00E+05Y	1.00	3.330E-01	3.330E-01	1.101E-01	33.05	
I-131	8.04D	10.6	4.964E-02	5.243E-01	6.035E-01	115.10	
NP-237	2.14E+06Y	1.00	9.777E-01	9.777E-01	3.220E-01	32.93	
Total Activity :			4.673E+00	5.286E+00			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr	2-Sigma	Flags
			Uncorrected	Decay Corr			
			pCi/GRAM	pCi/GRAM	2-Sigma Error	%Error	
CS-135	2.30E+06Y	1.00	6.156E-01	6.156E-01	3.633E-01	59.01	
ND-147	10.98D	5.62	3.532E-01	1.985E+00	0.719E+00	36.23	
Total Activity :			9.688E-01	2.600E+00			

Grand Total Activity : 4.839E+01 5.064E+01

Flags: "K" = Keyline not found "M" = Manually accepted  
"E" = Manually edited "A" = Nuclide specific abn. limit

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr 2-Sigma			Status
				pCi/GRAM	pCi/GRAM	%Error	
K-40	1460.81	10.67*	4.582E-01	2.111E+01	2.111E+01	13.60	OK
Final Mean for 1 Valid Peaks = 2.111E+01+/- 2.871E+00 ( 13.60%)							
BI-212	727.17	11.80*	7.716E-01	7.693E-01	7.693E-01	63.55	OK
	1620.62	2.75	4.293E-01	1.762E+00	1.762E+00	84.75	OK
Final Mean for 2 Valid Peaks = 8.654E-01+/- 4.646E-01 ( 53.69%)							
PB-212	238.63	44.60*	1.817E+00	1.025E+00	1.025E+00	14.75	OK
	300.09	3.41	1.555E+00	1.056E+00	1.056E+00	117.11	OK
Final Mean for 2 Valid Peaks = 1.025E+00+/- 1.500E-01 ( 14.63%)							
BI-214	609.31	46.30*	8.915E-01	2.213E+00	2.213E+00	14.12	OK
	1120.29	15.10	5.508E-01	2.405E+00	2.405E+00	32.68	OK
	1764.49	15.80	4.084E-01	3.421E+00	3.421E+00	20.81	OK
	2204.22	4.98	3.644E-01	-----	Line Not Found	-----	Absent
Final Mean for 3 Valid Peaks = 2.408E+00+/- 2.689E-01 ( 11.17%)							
PB-214	295.21	19.19	1.574E+00	2.395E+00	2.395E+00	16.14	OK
	351.92	37.19*	1.383E+00	2.393E+00	2.393E+00	13.49	OK
Final Mean for 2 Valid Peaks = 2.394E+00+/- 2.478E-01 ( 10.35%)							
RA-224	240.98	3.95*	1.806E+00	6.005E+00	6.005E+00	25.56	OK
Final Mean for 1 Valid Peaks = 6.005E+00+/- 1.535E+00 ( 25.56%)							
RA-226	186.21	3.28*	2.099E+00	5.807E+00	5.807E+00	186.80	OK
Final Mean for 1 Valid Peaks = 5.807E+00+/- 1.085E+01 (186.80%)							
AC-228	338.32	11.40	1.425E+00	9.881E-01	9.881E-01	58.85	OK
	911.07	27.70*	6.445E-01	1.135E+00	1.135E+00	27.14	OK
	969.11	16.60	6.144E-01	1.053E+00	1.053E+00	39.42	OK
Final Mean for 3 Valid Peaks = 1.088E+00+/- 2.276E-01 ( 20.92%)							
TH-234	63.29	3.80*	2.516E+00	2.046E+00	2.046E+00	66.24	OK
Final Mean for 1 Valid Peaks = 2.046E+00+/- 1.355E+00 ( 66.24%)							



Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CD-109	88.03	3.72*	2.618E+00	3.312E+00	3.451E+00	33.62	OK

Final Mean for 1 Valid Peaks = 3.451E+00+/- 1.160E+00 ( 33.62%)

SN-126	87.57	37.00*	2.618E+00	3.330E-01	3.330E-01	33.05	OK
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Final Mean for 1 Valid Peaks = 3.330E-01+/- 1.101E-01 ( 33.05%)

I-131	284.30	6.05	1.616E+00	-----	Line Not Found	-----	Absent
	364.48	81.20*	1.346E+00	4.964E-02	5.243E-01	115.10	OK
	636.97	7.26	8.597E-01	-----	Line Not Found	-----	Absent
	722.89	1.80	7.753E-01	-----	Line Not Found	-----	Absent

Final Mean for 1 Valid Peaks = 5.243E-01+/- 6.035E-01 (115.10%)

NP-237	86.50	12.60*	2.619E+00	9.777E-01	9.777E-01	32.93	OK
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Final Mean for 1 Valid Peaks = 9.777E-01+/- 3.220E-01 ( 32.93%)

Nuclide Type: ACTIVATION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CS-135	268.24	16.00*	1.682E+00	6.156E-01	6.156E-01	59.01	OK

Final Mean for 1 Valid Peaks = 6.156E-01+/- 3.633E-01 ( 59.01%)

ND-147	91.11	28.90	2.614E+00	3.347E-01	1.880E+00	39.26	OK
	531.02	13.10*	9.977E-01	6.948E-01	3.904E+00	81.15	OK

Final Mean for 2 Valid Peaks = 1.985E+00+/- 7.190E-01 ( 36.23%)

Flag: "\*" = Keyline

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.111E+01	2.871E+00	6.691E-01	6.860E-02	31.553
CD-109	3.451E+00	1.160E+00	1.539E+00	2.375E-01	2.242
SN-126	3.330E-01	1.101E-01	1.485E-01	2.099E-02	2.243
I-131	5.243E-01	6.035E-01	7.031E-01	6.207E-02	0.746
CS-135	6.156E-01	3.633E-01	3.110E-01	2.557E-02	1.979
ND-147	1.985E+00	7.190E-01	2.468E+00	2.281E-01	0.804
BI-212	8.654E-01	4.646E-01	5.729E-01	5.057E-02	1.511
PB-212	1.025E+00	1.500E-01	1.240E-01	1.020E-02	8.268
BI-214	2.408E+00	2.689E-01	1.451E-01	1.303E-02	16.590
PB-214	2.394E+00	2.478E-01	1.513E-01	1.325E-02	15.818
RA-224	6.005E+00	1.535E+00	1.410E+00	1.160E-01	4.259
RA-226	5.807E+00	1.085E+01	1.614E+00	2.955E+00	3.599
AC-228	1.088E+00	2.276E-01	2.877E-01	2.588E-02	3.780
TH-234	2.046E+00	1.355E+00	1.548E+00	1.289E-01	1.322
NP-237	9.777E-01	3.220E-01	4.356E-01	6.039E-02	2.244

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.809E-02		4.841E-01	8.717E-01	8.061E-02	0.044
NA-22	2.622E-02		5.191E-02	9.538E-02	9.401E-03	0.275
AL-26	-1.951E-03		2.505E-02	5.047E-02	4.563E-03	-0.039
TI-44	5.980E-03		4.632E-02	6.452E-02	6.049E-03	0.093
SC-46	-3.526E-02		5.613E-02	9.328E-02	8.363E-03	-0.378
V-48	4.440E-02		1.548E-01	2.791E-01	2.555E-02	0.159
CR-51	-4.881E-01		7.858E-01	1.120E+00	1.009E-01	-0.436
MN-54	1.996E-02		4.826E-02	8.788E-02	7.888E-03	0.227
CO-56	-2.169E-02		5.973E-02	9.694E-02	8.704E-03	-0.224
CO-57	-1.670E-02		4.037E-02	6.086E-02	5.162E-03	-0.274
CO-58	-4.884E-03		5.490E-02	8.690E-02	7.807E-03	-0.056
FE-59	-2.350E-02		1.331E-01	2.044E-01	2.029E-02	-0.115
CO-60	-1.825E-02		5.821E-02	9.976E-02	9.251E-03	-0.183
ZN-65	1.997E-01		1.239E-01	2.266E-01	2.105E-02	0.881
SE-75	2.130E-02		6.939E-02	9.512E-02	7.882E-03	0.224
RB-82	-1.983E-01		6.338E-01	1.098E+00	9.797E-02	-0.181
RB-83	3.482E-02		1.219E-01	1.640E-01	2.623E-02	0.212
KR-85	9.495E+00		9.589E+00	1.655E+01	1.532E+00	0.574
SR-85	5.534E-02		5.589E-02	9.643E-02	8.930E-03	0.574
Y-88	5.059E-02		4.003E-02	9.064E-02	8.091E-03	0.558
NB-93M	-4.108E+01		1.271E+01	2.743E+00	8.257E-01	-14.978
NB-94	-2.024E-03		4.306E-02	7.592E-02	6.814E-03	-0.027
NB-95	2.044E-01		8.933E-02	1.667E-01	1.486E-02	1.226
NB-95M	6.199E+01		3.374E+01	5.461E+01	4.490E+00	1.135
ZR-95	4.484E-02		9.759E-02	1.799E-01	1.752E-02	0.249
RU-103	-2.000E-02		5.749E-02	1.011E-01	1.472E-02	-0.198
RU-106	-2.460E-01		3.803E-01	6.443E-01	8.725E-02	-0.382
AG-108M	6.362E-02		4.367E-02	7.307E-02	6.442E-03	0.871

Sample ID : 1109167-07

Acquisition date : 25-OCT-2011 07:44:57

## ---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AG-110M	-9.440E-03		4.232E-02	6.665E-02	5.766E-03	-0.142
SN-113	3.743E-02		5.520E-02	1.033E-01	9.511E-03	0.362
TE123M	2.018E-02		4.481E-02	7.563E-02	6.084E-03	0.267
SB-124	-1.510E-02		5.798E-02	9.067E-02	8.170E-03	-0.167
I-125	3.219E-01		9.936E-01	1.724E+00	1.768E-01	0.187
SB-125	-4.577E-02		1.156E-01	2.030E-01	1.884E-02	-0.225
SB-126	5.156E-01	+	5.984E-01	6.201E-01	5.463E-02	0.832
SB-127	1.820E+00		1.511E+01	2.715E+01	2.364E+00	0.067
I-129	4.710E-02		9.521E-02	1.665E-01	2.041E-02	0.283
BA-133	-1.925E-02		5.991E-02	8.727E-02	1.161E-02	-0.221
CS-134	4.845E-02		4.591E-02	7.982E-02	7.200E-03	0.607
CS-136	-1.923E-01		2.400E-01	3.858E-01	3.657E-02	-0.498
CS-137	3.690E-02		4.559E-02	8.697E-02	7.512E-03	0.424
LA-138	3.653E-03		6.488E-02	1.160E-01	1.170E-02	0.031
CE-139	-1.330E-02		4.508E-02	7.384E-02	5.879E-03	-0.180
BA-140	5.815E-01		6.064E-01	1.033E+00	3.439E-01	0.563
LA-140	1.037E-01		1.439E-01	2.949E-01	2.877E-02	0.352
CE-141	6.269E-02		1.226E-01	2.077E-01	4.855E-02	0.302
CE-144	1.493E-01		3.189E-01	5.026E-01	4.190E-02	0.297
PM-144	-2.154E-02		4.024E-02	6.858E-02	6.001E-03	-0.314
PM-145	-7.131E-02		2.192E-01	3.645E-01	2.379E-01	-0.196
PM-146	-7.778E-04		8.744E-02	1.504E-01	1.384E-02	-0.005
EU-152	4.783E-01		3.595E-01	7.077E-01	8.584E-02	0.676
GD-153	-3.228E-02		1.602E-01	2.467E-01	2.876E-02	-0.131
EU-154	7.208E-02		1.440E-01	2.645E-01	2.607E-02	0.272
EU-155	4.029E-01	+	1.327E-01	2.253E-01	3.123E-02	1.788
EU-156	4.815E-01		1.371E+00	2.290E+00	5.261E-01	0.210
HO-166M	3.499E-03		7.953E-02	1.277E-01	1.122E-02	0.027
HF-172	9.557E-02		2.863E-01	4.497E-01	3.789E-02	0.213
LU-172	2.316E+00	+	1.648E+00	2.567E+00	2.381E-01	0.902
LU-173	2.543E-01		2.037E-01	2.960E-01	2.431E-02	0.859
HF-175	2.318E-02		6.647E-02	9.020E-02	7.852E-03	0.257
LU-176	-3.240E-02		3.723E-02	5.192E-02	4.381E-03	-0.624
TA-182	1.205E+00		2.926E-01	5.688E-01	5.279E-02	2.119
IR-192	-4.213E-02		1.018E-01	1.589E-01	1.467E-02	-0.265
HG-203	3.357E-02		7.291E-02	1.131E-01	9.559E-03	0.297
BI-207	1.353E-03		3.450E-02	6.145E-02	5.622E-03	0.022
TL-208	8.892E-01	+	2.447E-01	3.863E-01	3.515E-02	2.302
BI-210M	3.074E-02		8.154E-02	1.122E-01	9.232E-03	0.274
PB-210	3.028E-01		1.077E+00	1.877E+00	1.573E-01	0.161
PB-211	9.563E-01		1.299E+00	2.207E+00	1.990E-01	0.433
RN-219	-1.669E-01		5.710E-01	9.060E-01	8.157E-02	-0.184
RA-223	4.438E-01		9.028E-01	1.412E+00	1.210E-01	0.314
RA-225	-2.024E-01		5.205E-01	8.818E-01	8.185E-02	-0.230
TH-227	1.490E+00		4.097E-01	6.844E-01	5.628E-02	2.177
TH-230	1.433E+00		1.181E+01	1.645E+01	1.534E+00	0.087
PA-231	1.691E+00		1.519E+00	2.470E+00	2.076E-01	0.684
TH-231	-2.865E-01		4.337E-01	7.327E-01	1.079E-01	-0.391

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	8.608E-02		1.711E-01	2.873E-01	6.436E-02	0.300
PA-234	9.743E-02		1.657E-01	2.619E-01	2.190E-02	0.372
PA-234M	-1.082E+00		5.386E+00	9.359E+00	8.592E-01	-0.116
U-235	1.469E-01		3.166E-01	5.375E-01	9.307E-02	0.273
AM-241	6.978E-02		1.010E-01	1.632E-01	1.221E-02	0.427
AM-243	4.722E-01		8.683E-02	1.297E-01	1.421E-02	3.641
CM-243	2.677E-01	+	3.297E-01	4.338E-01	3.557E-02	0.617

Total number of lines in spectrum 63  
Number of unidentified lines 29  
Number of lines tentatively identified by NID 34 53.97%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected pCi/GRAM	Decay Corr pCi/GRAM			
K-40	1.28E+09Y	1.00	2.111E+01	2.111E+01	0.287E+01	13.60	
BI-212	1.41E+10Y	1.00	8.654E-01	8.654E-01	4.646E-01	53.69	
PB-212	1.41E+10Y	1.00	1.025E+00	1.025E+00	0.150E+00	14.63	
BI-214	1602.00Y	1.00	2.408E+00	2.408E+00	0.269E+00	11.17	
PB-214	1602.00Y	1.00	2.394E+00	2.394E+00	0.248E+00	10.35	
RA-224	1.41E+10Y	1.00	6.005E+00	6.005E+00	1.535E+00	25.56	
RA-226	1602.00Y	1.00	5.807E+00	5.807E+00	10.85E+00	186.80	
AC-228	1.41E+10Y	1.00	1.088E+00	1.088E+00	0.228E+00	20.92	
TH-234	4.47E+09Y	1.00	2.046E+00	2.046E+00	1.355E+00	66.24	
Total Activity :			4.275E+01	4.275E+01			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected pCi/GRAM	Decay Corr pCi/GRAM			
CD-109	464.00D	1.04	3.312E+00	3.451E+00	1.160E+00	33.62	
SN-126	1.00E+05Y	1.00	3.330E-01	3.330E-01	1.101E-01	33.05	
I-131	8.04D	10.6	4.964E-02	5.243E-01	6.035E-01	115.10	
NP-237	2.14E+06Y	1.00	9.777E-01	9.777E-01	3.220E-01	32.93	
Total Activity :			4.673E+00	5.286E+00			

Nuclide Type : ACTIVATION

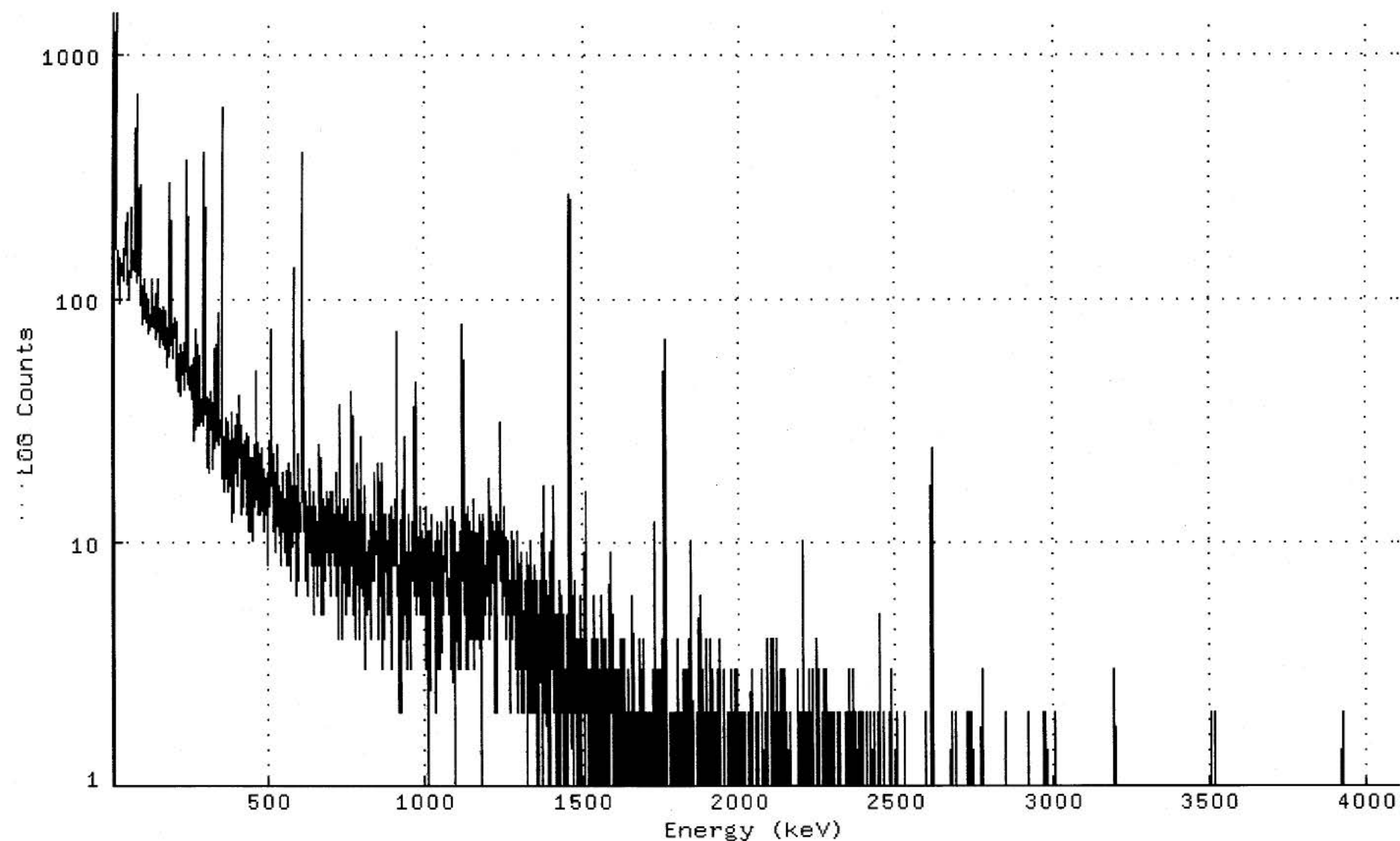
Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected pCi/GRAM	Decay Corr pCi/GRAM			
CS-135	2.30E+06Y	1.00	6.156E-01	6.156E-01	3.633E-01	59.01	
ND-147	10.98D	5.62	3.532E-01	1.985E+00	0.719E+00	36.23	
Total Activity :			9.688E-01	2.600E+00			

Grand Total Activity : 4.839E+01 5.064E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916707\_GE2\_GAS1102\_169780.CNF;1  
Title :  
Sample Title: JB-41-31-110928  
Start Time: 25-OCT-2011 07:44 Sample Time: 28-SEP-2011 00:00 Energy Offset: 6.87229E-02  
Real Time : 0 01:00:01.37 Sample ID : 1109167-07 Energy Slope : 9.99625E-01  
Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00



Channel Contents for DKA100: [GAMMA.SCUSR.ARCHIVE] SMP\_110916707\_GE2\_GAS1102\_1697

Channel

1:	0	0	0	0	0	0	1	269
9:	746	1232	1067	413	878	1491	222	170
17:	146	140	143	132	114	141	104	127
25:	120	130	95	145	125	124	137	129
33:	137	131	137	158	118	134	127	147
41:	153	170	161	165	150	190	221	127
49:	117	113	135	117	128	127	98	105
57:	111	118	129	122	138	157	235	187
65:	130	147	133	149	151	150	155	128
73:	170	232	492	235	679	379	116	129
81:	152	117	126	167	144	127	280	215
89:	126	218	131	178	288	140	97	89
97:	80	96	111	105	78	102	97	82
105:	120	100	97	96	103	81	92	85
113:	80	93	71	73	76	98	81	80
121:	81	78	80	85	74	76	92	84
129:	119	117	85	76	80	92	82	84
137:	77	72	68	88	97	79	92	120
145:	95	90	73	80	81	70	83	76
153:	81	90	63	70	88	84	70	78
161:	87	75	92	69	64	73	66	81
169:	62	63	77	88	67	72	53	67
177:	73	75	52	62	66	58	71	87
185:	127	295	149	79	79	76	77	64
193:	70	78	70	65	57	61	82	70
201:	70	70	69	74	80	58	61	46
209:	75	70	48	49	41	50	55	59
217:	52	64	62	51	40	48	48	56
225:	49	57	60	60	61	53	65	65
233:	42	59	50	54	62	326	366	81
241:	115	215	73	59	44	56	42	50
249:	52	43	48	45	42	38	42	45
257:	47	49	57	46	38	36	33	26
265:	31	33	43	31	54	74	57	45
273:	45	30	41	43	60	56	38	38
281:	30	47	34	36	31	38	37	34
289:	36	30	38	35	42	93	396	142
297:	33	36	45	58	42	37	32	34
305:	28	32	21	19	28	32	38	24
313:	33	33	34	32	41	30	29	29
321:	36	33	20	37	34	24	45	62
329:	36	35	34	26	33	43	34	33
337:	48	86	55	25	30	27	36	28
345:	29	31	27	30	28	36	252	604
353:	124	29	20	16	26	23	22	27
361:	22	24	25	18	32	30	29	22
369:	16	18	30	22	31	20	26	25
377:	25	26	26	17	22	34	22	22
385:	34	12	14	18	19	18	25	26
393:	27	19	23	24	24	30	29	17
401:	20	22	33	25	24	33	24	22
409:	40	31	29	13	20	17	17	20
417:	24	14	25	19	16	17	25	26
425:	22	18	24	23	25	13	20	20

433:	28	21	19	11	22	16	27	21
441:	11	21	22	14	16	20	17	18
449:	22	22	10	19	20	15	25	18
457:	17	20	14	19	15	26	50	22
465:	27	24	16	21	13	17	13	19
473:	23	23	13	22	17	24	18	23
481:	15	22	16	11	20	15	20	19
489:	11	18	18	14	13	18	15	12
497:	17	19	8	10	18	16	14	16
505:	15	26	22	17	34	57	74	42
513:	19	19	18	11	18	14	23	11
521:	19	12	11	9	10	13	25	19
529:	17	12	18	14	13	17	15	17
537:	11	10	16	11	8	8	10	15
545:	19	13	14	11	18	15	11	15
553:	15	9	13	13	17	17	15	18
561:	8	18	21	10	14	11	10	8
569:	11	19	18	8	7	7	13	14
577:	13	15	17	16	14	51	132	52
585:	13	11	14	16	10	13	17	6
593:	10	7	15	15	23	10	13	14
601:	13	11	12	13	16	19	21	127
609:	394	174	26	11	13	13	21	14
617:	16	10	7	12	9	12	14	6
625:	13	11	14	14	10	20	9	17
633:	11	9	10	10	10	10	10	8
641:	14	8	13	5	16	15	15	10
649:	8	14	10	9	11	11	6	12
657:	7	7	8	8	17	25	15	10
665:	22	22	13	8	5	9	14	13
673:	8	5	7	9	15	10	8	7
681:	10	14	10	14	16	14	10	9
689:	15	15	10	11	10	8	13	13
697:	6	7	12	9	16	12	13	16
705:	13	16	9	10	13	11	8	13
713:	8	15	6	8	19	17	13	14
721:	11	10	8	4	8	21	36	18
729:	15	8	11	10	9	13	4	12
737:	11	9	7	11	11	15	15	9
745:	5	10	6	14	10	10	6	11
753:	15	11	12	12	11	12	10	9
761:	6	8	11	10	8	10	29	41
769:	26	9	12	10	15	5	7	10
777:	11	8	12	4	11	10	14	13
785:	17	21	13	15	13	11	13	4
793:	10	27	18	7	11	8	11	13
801:	7	6	11	8	14	12	17	3
809:	8	12	5	8	7	9	9	8
817:	7	10	6	8	10	7	7	4
825:	10	8	7	8	13	11	7	11
833:	9	11	12	11	12	19	13	16
841:	7	11	10	9	11	9	10	8
849:	9	12	21	4	9	9	9	7
857:	6	8	15	21	16	12	9	7
865:	3	10	10	6	4	13	7	8
873:	10	13	13	11	8	10	7	5
881:	8	7	7	13	8	5	9	8
889:	13	6	6	8	3	10	14	11
897:	8	12	9	10	11	8	12	15
905:	12	9	9	10	11	52	73	31



913:	10	6	6	4	8	7	8	2
921:	8	7	10	2	10	11	14	4
929:	12	5	5	11	24	27	10	8
937:	5	13	5	3	7	9	6	7
945:	12	4	9	9	13	6	9	7
953:	3	7	7	8	7	7	9	9
961:	12	8	17	26	14	6	12	29
969:	45	15	7	5	10	9	7	7
977:	6	10	10	8	14	10	8	10
985:	5	8	11	10	5	6	8	7
993:	8	9	10	5	8	10	3	9
1001:	14	12	6	10	8	11	10	6
1009:	7	6	1	6	6	10	11	5
1017:	6	12	11	7	13	8	8	9
1025:	7	6	7	6	9	8	2	10
1033:	4	10	7	8	8	5	3	12
1041:	7	8	10	6	7	3	3	4
1049:	5	7	12	8	11	7	7	6
1057:	8	7	5	11	9	11	10	8
1065:	8	7	12	6	6	14	10	5
1073:	6	7	6	7	6	5	5	3
1081:	3	11	11	14	7	9	5	8
1089:	7	1	10	9	9	12	12	5
1097:	9	4	4	8	5	5	3	8
1105:	9	4	5	3	9	3	11	5
1113:	4	9	7	8	7	13	47	78
1121:	40	15	5	7	5	12	10	6
1129:	6	13	7	3	11	7	3	14
1137:	6	4	6	6	12	5	10	4
1145:	10	8	8	4	11	7	3	6
1153:	11	12	14	15	8	4	5	7
1161:	7	6	6	7	8	6	4	9
1169:	13	7	7	12	10	13	1	12
1177:	8	7	9	11	4	7	9	10
1185:	4	13	7	7	7	8	5	7
1193:	5	9	6	10	6	8	9	9
1201:	10	18	4	11	10	11	9	14
1209:	5	13	12	9	9	8	9	12
1217:	9	5	10	2	8	8	11	11
1225:	9	2	10	7	13	10	9	11
1233:	11	12	11	7	25	31	19	7
1241:	11	5	11	8	7	8	10	8
1249:	9	6	13	11	14	8	6	4
1257:	6	4	4	10	7	7	5	7
1265:	6	7	6	4	4	3	2	8
1273:	6	5	11	6	4	9	6	10
1281:	8	7	9	5	6	5	3	5
1289:	7	5	8	8	6	7	2	11
1297:	6	7	6	5	8	3	5	5
1305:	2	9	4	9	3	3	5	2
1313:	2	5	5	3	4	3	4	7
1321:	4	6	9	3	1	3	3	8
1329:	2	7	2	7	6	10	4	5
1337:	2	4	4	7	5	2	5	2
1345:	8	2	4	4	6	3	3	7
1353:	0	1	6	1	2	3	4	5
1361:	4	1	7	3	6	4	4	3
1369:	4	4	3	5	1	4	9	13
1377:	17	17	7	5	2	7	4	6
1385:	4	3	3	1	3	1	4	3

1393:	6	2	2	9	2	0	5	6
1401:	9	10	6	3	5	9	17	13
1409:	2	3	5	0	0	5	4	5
1417:	5	4	1	4	3	5	3	4
1425:	2	0	7	0	4	2	4	6
1433:	4	3	2	5	5	3	4	1
1441:	3	3	3	2	1	0	1	3
1449:	1	5	4	3	5	3	2	5
1457:	6	25	141	265	241	85	13	6
1465:	4	2	1	4	2	1	6	2
1473:	4	2	3	7	2	3	4	3
1481:	4	3	1	0	1	0	2	1
1489:	4	1	4	3	3	0	6	5
1497:	2	4	3	3	2	2	2	0
1505:	2	5	9	5	16	10	6	2
1513:	3	4	0	1	3	2	3	0
1521:	1	2	1	3	1	0	4	3
1529:	2	1	4	2	2	6	3	3
1537:	1	5	2	2	3	1	2	4
1545:	3	4	0	2	3	1	0	2
1553:	2	3	3	3	1	2	0	1
1561:	5	2	6	0	3	2	3	2
1569:	4	3	1	1	1	4	4	2
1577:	1	1	3	1	3	3	3	0
1585:	2	4	5	9	5	2	8	4
1593:	4	5	1	0	2	2	1	3
1601:	2	2	0	0	1	3	2	1
1609:	0	2	1	1	3	1	2	2
1617:	1	0	4	3	4	3	1	2
1625:	4	0	0	2	3	1	2	4
1633:	2	2	1	1	2	0	2	1
1641:	2	1	0	0	0	3	1	2
1649:	2	0	1	0	2	1	1	0
1657:	4	0	5	6	3	4	1	1
1665:	0	0	2	2	2	1	1	1
1673:	2	0	0	2	0	2	1	4
1681:	1	3	1	1	1	3	0	1
1689:	1	2	0	4	3	2	0	2
1697:	2	0	1	2	2	1	0	1
1705:	2	1	1	0	2	0	0	2
1713:	1	1	2	0	2	0	1	0
1721:	1	3	0	0	3	1	2	6
1729:	12	7	0	3	2	2	1	1
1737:	1	0	3	1	1	3	1	3
1745:	1	2	1	3	1	2	2	4
1753:	2	1	2	2	1	1	2	2
1761:	2	11	37	68	42	9	1	1
1769:	1	1	1	0	1	1	1	1
1777:	2	2	0	2	0	2	1	2
1785:	1	2	0	1	0	1	0	2
1793:	2	2	1	1	1	0	0	1
1801:	4	1	2	1	0	1	0	1
1809:	1	2	0	1	2	2	1	0
1817:	1	1	3	1	0	0	0	2
1825:	0	2	2	3	1	0	1	1
1833:	1	2	3	1	4	4	1	2
1841:	0	1	0	0	4	10	9	5
1849:	0	0	0	0	0	1	0	0
1857:	0	1	0	1	1	0	0	1
1865:	2	1	0	3	0	1	1	4

1873:	6	4	1	3	0	0	2	2
1881:	3	1	1	3	1	1	2	1
1889:	2	1	1	0	2	4	4	1
1897:	2	2	1	0	2	0	0	4
1905:	1	2	1	2	1	3	1	0
1913:	3	3	1	0	0	0	0	2
1921:	2	1	1	2	0	1	0	2
1929:	3	2	3	1	2	0	4	1
1937:	3	1	1	1	0	0	1	0
1945:	1	1	2	3	1	2	1	0
1953:	1	1	0	1	0	1	2	0
1961:	0	0	1	0	0	2	1	1
1969:	1	1	0	0	0	3	2	0
1977:	0	1	1	0	2	0	2	1
1985:	0	3	0	0	1	0	3	1
1993:	2	1	2	0	1	0	2	0
2001:	1	0	2	2	0	1	0	2
2009:	0	1	2	2	2	1	1	0
2017:	2	0	0	0	1	1	0	0
2025:	0	1	0	1	2	0	0	0
2033:	1	2	0	2	3	1	0	1
2041:	0	0	1	1	1	0	1	0
2049:	1	1	2	1	1	1	2	0
2057:	1	0	0	0	1	0	1	0
2065:	1	0	0	0	1	3	0	2
2073:	0	0	1	1	1	0	2	1
2081:	1	1	2	1	1	2	2	4
2089:	1	0	0	0	0	1	0	1
2097:	1	0	1	2	1	4	2	2
2105:	4	1	1	0	0	2	0	0
2113:	0	1	0	4	2	4	1	0
2121:	0	0	1	1	1	2	1	2
2129:	0	1	1	3	0	3	1	1
2137:	0	0	1	1	1	3	3	2
2145:	2	2	1	1	1	0	0	1
2153:	1	0	1	0	1	2	1	0
2161:	0	0	1	0	0	1	0	1
2169:	0	0	0	0	1	0	1	1
2177:	1	1	0	1	1	1	0	1
2185:	2	0	1	3	1	1	2	1
2193:	1	0	0	1	0	0	2	1
2201:	0	6	10	4	0	1	0	1
2209:	1	2	0	2	2	0	0	0
2217:	0	1	1	3	0	1	0	1
2225:	0	1	0	1	1	2	0	2
2233:	2	2	3	0	0	0	1	0
2241:	1	1	1	1	4	3	1	0
2249:	2	3	0	0	0	0	0	0
2257:	1	0	0	0	0	1	0	0
2265:	1	2	0	2	2	2	3	2
2273:	1	2	1	3	2	1	0	2
2281:	0	2	0	0	1	0	2	2
2289:	0	1	0	2	1	1	2	1
2297:	0	1	2	0	0	1	0	0
2305:	1	0	1	1	1	0	2	1
2313:	2	1	0	0	2	0	0	1
2321:	1	0	0	1	0	0	0	1
2329:	1	0	0	1	0	0	0	1
2337:	1	2	0	2	1	1	1	0
2345:	2	1	0	0	0	3	0	1

2353:	1	2	0	0	0	0	0	0
2361:	0	0	3	0	0	2	2	1
2369:	2	1	0	0	0	1	1	0
2377:	2	0	1	1	2	0	0	0
2385:	0	2	2	0	0	2	1	1
2393:	0	1	1	1	0	0	0	0
2401:	1	0	1	1	2	0	1	1
2409:	0	1	0	0	1	1	0	0
2417:	0	2	1	0	1	0	0	1
2425:	0	0	0	2	0	0	0	0
2433:	0	0	0	0	0	1	0	0
2441:	2	0	0	2	2	1	5	1
2449:	0	0	0	0	1	0	1	0
2457:	0	2	1	1	0	0	0	0
2465:	0	0	0	1	0	1	0	0
2473:	1	0	1	0	2	0	0	2
2481:	0	0	3	0	0	1	0	0
2489:	1	0	0	0	1	0	1	0
2497:	0	2	1	1	0	2	0	0
2505:	0	1	0	1	0	0	1	0
2513:	1	1	0	0	0	0	0	0
2521:	0	0	0	0	2	0	0	1
2529:	0	1	1	0	0	0	1	1
2537:	0	0	0	1	0	0	0	0
2545:	0	0	0	1	0	0	0	1
2553:	1	1	0	0	0	1	0	0
2561:	0	0	0	0	0	0	0	0
2569:	1	0	0	0	1	0	0	1
2577:	1	0	0	0	0	0	0	0
2585:	0	0	1	0	1	2	0	0
2593:	0	0	0	0	0	0	0	0
2601:	1	0	0	0	0	0	1	0
2609:	1	2	4	12	24	18	7	2
2617:	1	0	1	1	0	0	0	0
2625:	0	0	0	0	0	0	0	0
2633:	0	0	0	0	0	1	0	0
2641:	0	1	0	0	0	0	0	0
2649:	1	0	0	0	0	0	0	0
2657:	0	0	1	1	0	0	0	0
2665:	0	0	0	1	0	1	0	0
2673:	0	2	0	2	0	0	0	0
2681:	0	1	0	0	0	1	2	1
2689:	0	0	0	0	1	0	0	0
2697:	0	0	0	0	1	1	0	0
2705:	0	1	0	0	0	0	0	0
2713:	0	0	1	0	0	0	0	1
2721:	0	0	0	1	0	2	0	0
2729:	0	0	1	0	2	0	0	0
2737:	1	1	0	2	0	0	0	0
2745:	0	0	1	0	1	1	1	0
2753:	0	0	1	0	0	0	0	0
2761:	1	0	1	0	0	0	1	1
2769:	0	0	3	0	0	0	0	0
2777:	0	0	1	1	1	1	1	1
2785:	0	0	0	0	0	1	0	0
2793:	1	0	0	0	1	0	0	0
2801:	1	0	0	0	0	0	0	1
2809:	0	1	1	0	1	0	1	0
2817:	0	0	0	0	0	1	0	0
2825:	0	1	1	0	0	0	1	0

2833:	0	0	0	0	0	0	0	0
2841:	1	0	1	0	0	0	2	0
2849:	0	1	1	0	0	0	0	0
2857:	0	0	0	0	0	1	1	0
2865:	1	0	0	0	1	0	0	1
2873:	0	0	0	0	0	0	0	0
2881:	0	0	0	0	1	0	1	0
2889:	0	0	0	1	0	1	0	0
2897:	0	0	0	0	0	0	0	0
2905:	0	0	0	1	1	0	0	1
2913:	0	0	1	0	0	0	0	1
2921:	2	0	0	0	0	1	0	0
2929:	0	0	0	0	1	1	0	0
2937:	1	1	0	0	1	0	0	1
2945:	0	0	1	0	0	0	1	0
2953:	0	0	0	0	0	0	0	0
2961:	0	0	0	0	1	0	0	0
2969:	2	0	1	0	0	0	0	2
2977:	1	0	0	0	0	0	0	0
2985:	0	0	0	0	1	0	0	0
2993:	0	0	0	1	0	1	0	0
3001:	0	2	0	0	2	0	0	1
3009:	0	0	0	0	1	0	0	0
3017:	0	0	0	1	0	1	0	0
3025:	0	0	0	0	0	0	0	1
3033:	0	0	1	0	0	0	0	0
3041:	0	0	0	1	0	0	1	0
3049:	1	1	0	0	1	0	0	0
3057:	0	0	0	0	0	0	0	0
3065:	1	0	0	1	0	0	0	0
3073:	0	0	0	0	0	0	0	0
3081:	1	0	0	0	0	0	0	1
3089:	0	0	0	0	1	0	0	0
3097:	0	1	0	0	1	0	0	0
3105:	0	1	1	0	0	0	0	0
3113:	0	0	0	0	1	0	0	0
3121:	1	0	0	0	0	0	0	0
3129:	0	0	0	0	0	0	0	0
3137:	1	0	0	0	0	0	0	1
3145:	0	0	0	0	0	0	0	0
3153:	0	0	1	1	0	0	1	0
3161:	0	1	0	0	0	0	0	0
3169:	1	0	0	0	0	0	0	0
3177:	0	0	0	0	0	1	1	1
3185:	0	0	0	0	0	1	0	0
3193:	0	0	3	0	0	1	1	0
3201:	0	0	0	0	0	0	0	0
3209:	0	1	0	0	0	0	0	0
3217:	0	0	0	0	1	0	0	0
3225:	1	0	0	0	0	0	0	0
3233:	1	0	0	0	0	0	0	1
3241:	0	0	0	0	1	0	0	0
3249:	0	0	0	0	0	0	0	0
3257:	0	0	1	1	0	0	1	0
3265:	0	0	0	0	0	0	0	0
3273:	0	0	0	0	0	0	0	0
3281:	0	0	0	0	1	0	0	0
3289:	0	0	0	0	0	0	1	0
3297:	1	0	0	0	0	1	0	0
3305:	0	0	0	0	0	1	0	1

3313:	0	0	0	0	0	1	1	0
3321:	1	1	0	0	0	0	0	0
3329:	0	0	0	0	0	0	1	1
3337:	0	0	0	0	1	0	0	0
3345:	0	0	0	0	0	0	1	0
3353:	0	0	0	0	0	0	0	1
3361:	0	0	1	0	0	0	0	0
3369:	0	0	0	0	0	0	0	0
3377:	0	0	1	0	0	1	0	0
3385:	1	0	0	0	0	0	0	0
3393:	1	0	1	1	0	0	0	0
3401:	0	0	0	0	1	0	0	0
3409:	0	0	1	0	0	0	0	0
3417:	0	0	0	0	0	1	0	0
3425:	1	0	0	0	0	0	0	0
3433:	0	0	0	0	0	0	0	0
3441:	0	0	0	0	0	0	0	0
3449:	0	0	0	0	0	0	0	0
3457:	0	0	0	0	0	0	0	0
3465:	0	0	0	0	0	1	1	0
3473:	0	0	0	0	0	0	0	0
3481:	0	0	0	0	0	0	0	0
3489:	0	0	0	0	0	0	0	0
3497:	0	0	0	0	0	0	2	0
3505:	0	0	0	0	0	0	0	0
3513:	0	2	0	0	0	0	0	1
3521:	1	0	0	0	0	0	0	0
3529:	0	0	0	0	0	1	0	0
3537:	0	0	0	1	0	0	0	0
3545:	1	0	0	0	0	0	0	0
3553:	0	1	0	0	0	0	0	1
3561:	0	0	0	0	0	0	0	0
3569:	0	0	0	0	0	0	0	1
3577:	0	0	1	0	0	0	1	0
3585:	1	0	0	0	0	0	0	0
3593:	0	1	0	0	0	1	1	0
3601:	0	1	0	0	0	0	0	0
3609:	0	0	0	0	0	0	0	0
3617:	0	0	1	0	0	0	1	0
3625:	0	0	0	0	0	0	0	0
3633:	0	0	0	0	0	0	0	0
3641:	0	0	0	0	0	0	0	0
3649:	0	0	0	0	1	0	1	1
3657:	0	0	0	0	0	0	0	0
3665:	0	0	0	0	0	0	0	0
3673:	0	0	0	0	0	0	0	1
3681:	0	0	0	0	0	0	0	0
3689:	0	0	0	0	0	0	0	0
3697:	1	1	0	0	0	0	0	0
3705:	0	0	0	0	1	0	0	0
3713:	0	0	0	0	0	0	0	0
3721:	0	0	0	0	0	0	0	0
3729:	0	1	1	0	1	0	0	0
3737:	0	0	0	0	0	0	0	0
3745:	0	0	0	0	0	0	0	0
3753:	0	0	0	0	0	0	0	0
3761:	0	0	0	1	0	0	0	1
3769:	0	0	0	0	0	0	0	0
3777:	0	0	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	0

3793:	0	0	0	0	0	0	1	0
3801:	0	0	0	1	0	0	0	0
3809:	0	0	0	0	0	0	1	0
3817:	0	0	0	0	0	0	0	0
3825:	1	0	0	1	0	0	0	0
3833:	0	0	0	0	0	0	1	0
3841:	0	0	0	0	0	0	0	0
3849:	0	1	0	0	0	0	1	0
3857:	0	0	0	0	0	0	0	0
3865:	0	0	0	0	0	1	1	0
3873:	1	0	0	0	0	0	0	1
3881:	0	1	0	0	0	0	0	0
3889:	0	1	0	0	0	0	0	0
3897:	0	0	0	0	0	0	0	0
3905:	0	0	0	0	0	0	0	0
3913:	0	0	0	0	0	2	0	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	1	0	0	0	0
3937:	0	0	1	0	0	1	0	0
3945:	0	0	0	0	0	0	0	0
3953:	0	0	1	0	0	0	1	0
3961:	0	0	0	0	0	0	0	1
3969:	1	0	0	0	0	0	0	0
3977:	0	1	0	0	0	0	0	0
3985:	0	0	0	1	0	0	0	0
3993:	0	0	0	0	0	0	0	0
4001:	0	0	0	1	0	0	0	0
4009:	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	0	0	0	0
4033:	0	0	0	0	0	0	0	1
4041:	0	0	0	0	0	0	0	0
4049:	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	1	0	0	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	1	0	1	0	0	0

Sample ID : 1109167-08

Page : 1  
Acquisition date : 25-OCT-2011 07:58:20

VAX/VMS Peak Search Report Generated 25-OCT-2011 08:59:29.71

Configuration : DKA100: [GAMMA.SCUSR.ARCHIVE] SMP\_110916708\_GE3\_GAS1102\_169782.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : JB-41-32-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 07:58:20  
 Sample ID : 1109167-08 Sample Quantity : 5.69750E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE3 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:28.80 0.8%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	46.04*	159	680	1.34	46.32	43	7	57.5		PB-210
0	62.82*	158	1247	1.44	63.10	59	9	82.7		TH-234
0	75.81*	1253	1876	3.62	76.10	72	12	15.0		AM-243
1	83.84	86	254	1.37	84.12	83	9	48.6	1.92E+01	
1	87.84	186	578	1.38	88.13	83	9	39.5		NP-237 SN-126 CD-109
0	128.55	188	853	7.76	128.84	124	11	62.1		
0	153.63	67	449	1.91	153.91	151		6103.8		
0	172.18	72	361	3.83	172.47	170	6	86.7		
0	186.16*	260	451	1.99	186.45	183	7	30.4		RA-226
0	208.95	90	534	2.11	209.24	205	9	95.8		
1	238.62*	649	222	1.59	238.91	235	14	10.4	1.33E+01	PB-212
1	241.85*	260	212	1.59	242.14	235	14	22.7		RA-224
0	270.30*	59	274	2.14	270.60	267	7	97.9		
5	295.44*	540	152	1.50	295.73	292	12	11.1	4.70E+00	PB-214
5	300.22	63	224	2.26	300.51	292	12	81.8		PB-212
0	338.71*	98	210	1.40	339.00	335	8	55.9		AC-228
0	352.01*	928	330	1.86	352.31	347	13	10.5		PB-214
0	367.84	40	132	3.82	368.14	366		7100.6		
0	389.43	33	140	2.48	389.74	386		7123.0		
0	463.66	48	133	1.85	463.97	457	9	90.7		
0	511.12*	77	146	2.14	511.43	506	11	69.0		
0	521.60	36	77	3.39	521.91	518	8	91.5		
0	583.49*	153	94	1.81	583.80	580	8	27.9		TL-208
0	609.77*	636	181	1.56	610.08	605	17	12.7		BI-214
0	727.67	29	81	1.14	727.99	725		7109.1		BI-212
0	753.03	36	59	2.83	753.36	748	11	89.8		
0	761.12	19	50	2.87	761.45	759		7127.6		
0	769.24*	58	85	1.45	769.56	765	10	65.7		
0	796.84	38	51	1.74	797.17	793	9	76.5		
0	821.06	16	22	1.43	821.39	819		5101.6		
0	837.49	46	74	5.01	837.82	834	10	75.5		
0	911.45*	133	63	1.93	911.78	908	10	28.3		AC-228
0	922.98	26	33	3.65	923.32	920	7	83.4		
0	934.64	40	46	1.96	934.97	932	8	67.3		

AG

10/25/11

0174



It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	967.81	87	58	5.85	968.15	963	11	40.3		AC-228
0	986.35	22	37	3.46	986.69	983		8108.7		
0	1109.90	26	51	3.76	1110.25	1107		10108.7		
0	1120.69	128	72	2.02	1121.04	1117	10	30.3		BI-214
1	1232.62	24	43	2.26	1232.97	1229	15	100.4	8.72E-01	
1	1238.62*	57	38	2.27	1238.98	1229	15	47.3		
0	1310.12	31	39	4.04	1310.47	1305	14	92.4		
0	1327.33	18	17	5.44	1327.69	1323	8	95.3		
0	1332.15*	12	4	1.59	1332.51	1331	5	85.8		
0	1377.95*	33	23	1.41	1378.32	1374	9	63.3		
0	1402.81	19	22	4.64	1403.18	1399	8	95.3		
0	1408.80	15	23	2.15	1409.17	1406		7117.4		
0	1428.87	27	10	11.10	1429.23	1423	14	63.7		
3	1461.12*	590	9	2.27	1461.49	1455	27	8.4	1.55E+00	K-40
3	1468.78	9	9	2.87	1469.14	1455		27174.6		
3	1472.57	20	9	2.88	1472.93	1455	27	75.1		
0	1512.32	26	20	2.63	1512.69	1506	14	83.8		
0	1542.45	26	11	8.95	1542.82	1536	15	67.7		
0	1701.33	7	0	3.31	1701.71	1699	6	75.6		
0	1730.13	29	0	1.33	1730.52	1726	12	37.1		
0	1764.78*	100	13	2.58	1765.16	1759	13	25.3		BI-214
0	1793.56	5	2	2.52	1793.95	1792		5107.8		
0	1828.40	7	4	2.85	1828.79	1824		8118.4		
0	1834.81	6	2	1.61	1835.20	1832		7109.7		
0	1847.69	17	7	1.47	1848.08	1843	9	72.3		
0	1921.82	10	2	1.93	1922.21	1918	7	76.7		
0	1926.85	11	2	2.85	1927.25	1925	6	70.3		
0	1966.62	6	4	1.56	1967.02	1962		8134.7		
0	2118.40	15	2	3.56	2118.81	2114	9	63.2		
0	2205.19	21	2	2.68	2205.60	2201	9	51.0		BI-214
0	2614.97*	52	6	2.34	2615.41	2609	11	33.8		TL-208

Total number of lines in spectrum 65  
Number of unidentified lines 34  
Number of lines tentatively identified by NID 31 47.69%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected pCi/GRAM	Decay Corr pCi/GRAM			
K-40	1.28E+09Y	1.00	1.924E+01	1.924E+01	0.249E+01	12.95	
TL-208	1.41E+10Y	1.00	7.223E-01	7.223E-01	1.665E-01	23.06	
PB-210	22.26Y	1.00	2.964E+00	2.971E+00	1.739E+00	58.53	
BI-212	1.41E+10Y	1.00	4.949E-01	4.949E-01	5.422E-01	109.56	
PB-212	1.41E+10Y	1.00	1.107E+00	1.107E+00	0.157E+00	14.15	
BI-214	1602.00Y	1.00	2.319E+00	2.319E+00	0.292E+00	12.59	
PB-214	1602.00Y	1.00	2.539E+00	2.539E+00	0.259E+00	10.20	
RA-224	1.41E+10Y	1.00	5.002E+00	5.002E+00	1.238E+00	24.76	
RA-226	1602.00Y	1.00	5.102E+00	5.102E+00	9.477E+00	185.74	
AC-228	1.41E+10Y	1.00	1.126E+00	1.126E+00	0.253E+00	22.49	
TH-234	4.47E+09Y	1.00	2.477E+00	2.477E+00	2.063E+00	83.26	
Total Activity :			4.309E+01	4.310E+01			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected pCi/GRAM	Decay Corr pCi/GRAM			
CD-109	464.00D	1.04	2.667E+00	2.778E+00	1.191E+00	42.89	
SN-126	1.00E+05Y	1.00	2.683E-01	2.683E-01	1.139E-01	42.44	
NP-237	2.14E+06Y	1.00	7.892E-01	7.892E-01	3.342E-01	42.35	
Total Activity :			3.724E+00	3.835E+00			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected pCi/GRAM	Decay Corr pCi/GRAM			
AM-243	7380.00Y	1.00	1.050E+00	1.050E+00	0.205E+00	19.50	
Total Activity :			1.050E+00	1.050E+00			

Grand Total Activity : 4.786E+01 4.798E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr 2-Sigma			Status
				pCi/GRAM	pCi/GRAM	%Error	
K-40	1460.81	10.67*	3.789E-01	1.924E+01	1.924E+01	12.95	OK
Final Mean for 1 Valid Peaks = 1.924E+01+/- 2.492E+00 ( 12.95%)							
TL-208	583.14	30.22*	8.029E-01	8.335E-01	8.335E-01	29.85	OK
	860.37	4.48	5.645E-01	-----	Line Not Found	-----	Absent
	2614.66	35.85	3.019E-01	6.320E-01	6.320E-01	35.47	OK
Final Mean for 2 Valid Peaks = 7.223E-01+/- 1.665E-01 ( 23.06%)							
PB-210	46.50	4.05*	1.750E+00	2.964E+00	2.971E+00	58.53	OK
Final Mean for 1 Valid Peaks = 2.971E+00+/- 1.739E+00 ( 58.53%)							
BI-212	727.17	11.80*	6.552E-01	4.949E-01	4.949E-01	109.56	OK
	1620.62	2.75	3.568E-01	-----	Line Not Found	-----	Absent
Final Mean for 1 Valid Peaks = 4.949E-01+/- 5.422E-01 (109.56%)							
PB-212	238.63	44.60*	1.744E+00	1.099E+00	1.099E+00	14.34	OK
	300.09	3.41	1.461E+00	1.672E+00	1.672E+00	82.30	OK
Final Mean for 2 Valid Peaks = 1.107E+00+/- 1.566E-01 ( 14.15%)							
BI-214	609.31	46.30*	7.707E-01	2.348E+00	2.348E+00	16.54	OK
	1120.29	15.10	4.552E-01	2.447E+00	2.447E+00	32.13	OK
	1764.49	15.80	3.416E-01	2.437E+00	2.437E+00	27.15	OK
	2204.22	4.98	3.132E-01	1.756E+00	1.756E+00	52.02	OK
Final Mean for 4 Valid Peaks = 2.319E+00+/- 2.919E-01 ( 12.59%)							
PB-214	295.21	19.19	1.480E+00	2.503E+00	2.503E+00	14.43	OK
	351.92	37.19*	1.276E+00	2.577E+00	2.577E+00	14.42	OK
Final Mean for 2 Valid Peaks = 2.539E+00+/- 2.590E-01 ( 10.20%)							
RA-224	240.98	3.95*	1.732E+00	5.002E+00	5.002E+00	24.76	OK
Final Mean for 1 Valid Peaks = 5.002E+00+/- 1.238E+00 ( 24.76%)							
RA-226	186.21	3.28*	2.048E+00	5.102E+00	5.102E+00	185.74	OK
Final Mean for 1 Valid Peaks = 5.102E+00+/- 9.477E+00 (185.74%)							
AC-228	338.32	11.40	1.320E+00	8.592E-01	8.592E-01	56.79	OK
	911.07	27.70*	5.376E-01	1.176E+00	1.176E+00	29.74	OK
	969.11	16.60	5.106E-01	1.345E+00	1.345E+00	41.40	OK
Final Mean for 3 Valid Peaks = 1.126E+00+/- 2.532E-01 ( 22.49%)							

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
TH-234	63.29	3.80*	2.218E+00	2.477E+00	2.477E+00	83.26	OK

Final Mean for 1 Valid Peaks = 2.477E+00+/- 2.063E+00 ( 83.26%)

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CD-109	88.03	3.72*	2.473E+00	2.667E+00	2.778E+00	42.89	OK

Final Mean for 1 Valid Peaks = 2.778E+00+/- 1.191E+00 ( 42.89%)

SN-126	87.57	37.00*	2.471E+00	2.683E-01	2.683E-01	42.44	OK
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Final Mean for 1 Valid Peaks = 2.683E-01+/- 1.139E-01 ( 42.44%)

NP-237	86.50	12.60*	2.467E+00	7.892E-01	7.892E-01	42.35	OK
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Final Mean for 1 Valid Peaks = 7.892E-01+/- 3.342E-01 ( 42.35%)

Nuclide Type: ACTIVATION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
AM-243	74.67	66.00*	2.383E+00	1.050E+00	1.050E+00	19.50	OK

Final Mean for 1 Valid Peaks = 1.050E+00+/- 2.047E-01 ( 19.50%)

Flag: "\*" = Keyline

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	1.924E+01	2.492E+00	6.334E-01	5.681E-02	30.371
CD-109	2.778E+00	1.191E+00	1.920E+00	3.096E-01	1.447
SN-126	2.683E-01	1.139E-01	1.854E-01	2.760E-02	1.447
TL-208	7.223E-01	1.665E-01	2.213E-01	2.191E-02	3.264
PB-210	2.971E+00	1.739E+00	1.624E+00	1.636E-01	1.829
BI-212	4.949E-01	5.422E-01	5.992E-01	5.540E-02	0.826
PB-212	1.107E+00	1.566E-01	1.216E-01	1.102E-02	9.100
BI-214	2.319E+00	2.919E-01	1.502E-01	1.469E-02	15.435
PB-214	2.539E+00	2.590E-01	1.534E-01	1.387E-02	16.549
RA-224	5.002E+00	1.238E+00	1.384E+00	1.247E-01	3.613
RA-226	5.102E+00	9.477E+00	1.567E+00	2.871E+00	3.255
AC-228	1.126E+00	2.532E-01	2.567E-01	2.085E-02	4.385
TH-234	2.477E+00	2.063E+00	1.668E+00	1.518E-01	1.485
NP-237	7.892E-01	3.342E-01	5.450E-01	7.965E-02	1.448
AM-243	1.050E+00	2.047E-01	1.001E-01	1.175E-02	10.487

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.061E-01		5.497E-01	8.917E-01	8.871E-02	-0.119
NA-22	-4.388E-03		6.076E-02	1.069E-01	9.800E-03	-0.041
AL-26	-1.401E-02		3.588E-02	6.165E-02	5.515E-03	-0.227
TI-44	-5.450E-02		4.975E-02	6.650E-02	6.753E-03	-0.820
SC-46	3.771E-02		5.778E-02	1.103E-01	8.940E-03	0.342
V-48	1.271E-01		1.692E-01	3.000E-01	2.613E-02	0.424
CR-51	-4.833E-01		6.818E-01	1.082E+00	9.864E-02	-0.446
MN-54	2.931E-02		5.577E-02	9.535E-02	8.208E-03	0.307
CO-56	-6.909E-03		5.823E-02	9.380E-02	7.981E-03	-0.074
CO-57	1.446E-02		3.683E-02	5.923E-02	6.880E-03	0.244
CO-58	-5.338E-02		5.510E-02	9.056E-02	7.981E-03	-0.590
FE-59	4.112E-02		1.459E-01	2.678E-01	2.744E-02	0.154
CO-60	-1.826E-02		5.766E-02	9.911E-02	1.007E-02	-0.184
ZN-65	1.381E-02		1.427E-01	1.865E-01	1.817E-02	0.074
SE-75	1.698E-02		6.327E-02	9.978E-02	8.533E-03	0.170
RB-82	-2.872E-01		7.784E-01	1.227E+00	1.106E-01	-0.234
RB-83	1.443E-01	+	1.344E-01	1.761E-01	2.896E-02	0.820
KR-85	1.746E+01		1.151E+01	1.806E+01	1.809E+00	0.967
SR-85	1.018E-01		6.711E-02	1.053E-01	1.054E-02	0.967
Y-88	2.864E-02	+	3.155E-02	7.870E-02	7.037E-03	0.364
NB-93M	-9.532E-01		2.924E+00	5.001E+00	3.698E+00	-0.191
NB-94	-1.525E-02		4.208E-02	7.383E-02	6.118E-03	-0.207
NB-95	1.235E-01		9.734E-02	1.533E-01	1.391E-02	0.806
NB-95M	1.082E+01		2.776E+01	4.379E+01	3.989E+00	0.247
ZR-95	7.917E-02		1.054E-01	1.632E-01	1.623E-02	0.485
RU-103	1.624E-02		6.391E-02	1.086E-01	1.633E-02	0.150
RU-106	-1.296E-01		4.095E-01	6.530E-01	9.195E-02	-0.198
AG-108M	-2.440E-02		5.496E-02	8.512E-02	7.883E-03	-0.287

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AG-110M	-2.101E-02		4.585E-02	8.043E-02	7.583E-03	-0.261
SN-113	6.891E-03		7.059E-02	1.087E-01	1.055E-02	0.063
TE123M	1.746E-02		4.379E-02	6.987E-02	7.127E-03	0.250
SB-124	-1.395E-02		6.334E-02	1.015E-01	9.962E-03	-0.137
I-125	3.726E-01		9.923E-01	1.774E+00	2.486E-01	0.210
SB-125	7.391E-02		1.214E-01	2.109E-01	2.082E-02	0.350
SB-126	1.086E-01		4.088E-01	6.845E-01	6.345E-02	0.159
SB-127	3.356E+00		1.496E+01	2.779E+01	2.601E+00	0.121
I-129	1.657E-02		1.042E-01	1.860E-01	3.458E-02	0.089
I-131	-2.693E-01		4.300E-01	6.208E-01	5.702E-02	-0.434
BA-133	6.681E-03		5.853E-02	9.800E-02	1.324E-02	0.068
CS-134	1.454E-02		4.558E-02	7.694E-02	7.559E-03	0.189
CS-135	2.167E-01		2.212E-01	3.612E-01	3.035E-02	0.600
CS-136	-5.894E-02		2.483E-01	4.375E-01	4.139E-02	-0.135
CS-137	-3.486E-02		4.805E-02	8.222E-02	7.737E-03	-0.424
LA-138	3.581E-02		5.914E-02	1.127E-01	9.790E-03	0.318
CE-139	1.294E-02		4.504E-02	7.147E-02	7.098E-03	0.181
BA-140	-1.974E-01		5.904E-01	1.051E+00	3.524E-01	-0.188
LA-140	9.341E-02		2.211E-01	4.242E-01	3.768E-02	0.220
CE-141	7.370E-02		1.119E-01	1.910E-01	4.656E-02	0.386
CE-144	-2.032E-03		3.055E-01	4.809E-01	5.367E-02	-0.004
PM-144	7.775E-03		4.133E-02	7.654E-02	7.154E-03	0.102
PM-145	7.103E-02		2.170E-01	3.780E-01	2.490E-01	0.188
PM-146	9.597E-02		1.029E-01	1.695E-01	1.671E-02	0.566
ND-147	1.345E-01		1.318E+00	2.452E+00	2.456E-01	0.055
EU-152	3.431E-01	+	4.048E-01	7.109E-01	7.770E-02	0.483
GD-153	-4.316E-02		1.361E-01	2.304E-01	3.070E-02	-0.187
EU-154	-8.932E-03		1.690E-01	2.980E-01	2.731E-02	-0.030
EU-155	3.252E-01	+	1.377E-01	2.309E-01	3.375E-02	1.408
EU-156	-4.415E-01		1.374E+00	2.422E+00	5.547E-01	-0.182
HO-166M	-4.901E-02		7.453E-02	1.279E-01	1.189E-02	-0.383
HF-172	2.421E-01		2.619E-01	4.580E-01	5.248E-02	0.529
LU-172	2.163E-03		1.426E+00	2.556E+00	2.446E-01	0.001
LU-173	1.708E-01		1.797E-01	2.921E-01	2.425E-02	0.585
HF-175	2.754E-02		5.942E-02	8.435E-02	7.543E-03	0.326
LU-176	-1.135E-02		3.894E-02	5.853E-02	4.965E-03	-0.194
TA-182	1.250E+00	+	4.018E-01	6.291E-01	6.152E-02	1.987
IR-192	-9.853E-02		1.003E-01	1.348E-01	1.336E-02	-0.731
HG-203	2.238E-02		6.408E-02	1.090E-01	9.118E-03	0.205
BI-207	5.914E-03		3.732E-02	6.895E-02	6.860E-03	0.086
BI-210M	-5.612E-02		6.729E-02	1.071E-01	9.163E-03	-0.524
PB-211	-1.602E-01		1.295E+00	2.124E+00	2.032E-01	-0.075
RN-219	1.726E-01		5.855E-01	9.874E-01	9.426E-02	0.175
RA-223	2.777E-01		8.725E-01	1.481E+00	1.289E-01	0.188
RA-225	-9.096E-02		5.335E-01	8.659E-01	1.033E-01	-0.105
TH-227	2.347E-01		3.216E-01	5.150E-01	4.689E-02	0.456
TH-230	-1.417E+01		1.269E+01	1.695E+01	1.713E+00	-0.836
PA-231	1.426E-02		1.623E+00	2.493E+00	2.101E-01	0.006

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-231	-9.010E-02		5.432E-01	9.588E-01	2.374E-01	-0.094
PA-233	5.345E-03		1.684E-01	2.818E-01	6.319E-02	0.019
PA-234	1.582E-01		1.446E-01	2.533E-01	2.849E-02	0.625
PA-234M	1.172E+00		5.234E+00	9.649E+00	8.540E-01	0.122
U-235	-9.135E-02		2.900E-01	4.830E-01	9.015E-02	-0.189
AM-241	1.032E-01		1.104E-01	1.830E-01	1.507E-02	0.564
CM-243	7.510E-02		2.366E-01	4.016E-01	3.274E-02	0.187

Total number of lines in spectrum 65  
Number of unidentified lines 34  
Number of lines tentatively identified by NID 31 47.69%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.924E+01	1.924E+01	0.249E+01	12.95	
TL-208	1.41E+10Y	1.00	7.223E-01	7.223E-01	1.665E-01	23.06	
PB-210	22.26Y	1.00	2.964E+00	2.971E+00	1.739E+00	58.53	
BI-212	1.41E+10Y	1.00	4.949E-01	4.949E-01	5.422E-01	109.56	
PB-212	1.41E+10Y	1.00	1.107E+00	1.107E+00	0.157E+00	14.15	
BI-214	1602.00Y	1.00	2.319E+00	2.319E+00	0.292E+00	12.59	
PB-214	1602.00Y	1.00	2.539E+00	2.539E+00	0.259E+00	10.20	
RA-224	1.41E+10Y	1.00	5.002E+00	5.002E+00	1.238E+00	24.76	
RA-226	1602.00Y	1.00	5.102E+00	5.102E+00	9.477E+00	185.74	
AC-228	1.41E+10Y	1.00	1.126E+00	1.126E+00	0.253E+00	22.49	
TH-234	4.47E+09Y	1.00	2.477E+00	2.477E+00	2.063E+00	83.26	
Total Activity :			4.309E+01	4.310E+01			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	2.667E+00	2.778E+00	1.191E+00	42.89	
SN-126	1.00E+05Y	1.00	2.683E-01	2.683E-01	1.139E-01	42.44	
NP-237	2.14E+06Y	1.00	7.892E-01	7.892E-01	3.342E-01	42.35	
Total Activity :			3.724E+00	3.835E+00			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
AM-243	7380.00Y	1.00	1.050E+00	1.050E+00	0.205E+00	19.50	
Total Activity :			1.050E+00	1.050E+00			

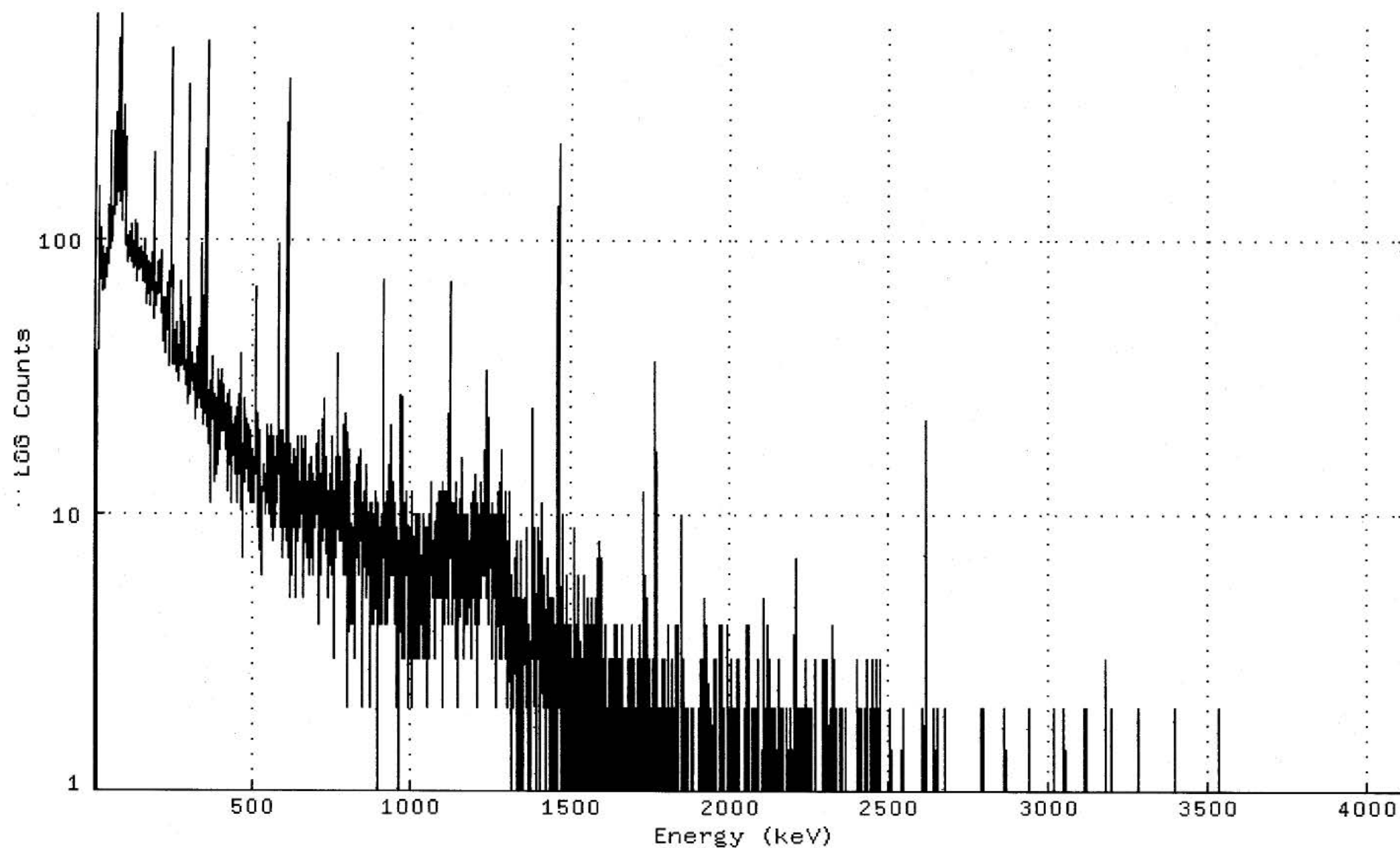
Grand Total Activity : 4.786E+01 4.798E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit



Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916708\_GE3\_GAS1102\_169782.CNF;1  
Title :  
Sample Title: JB-41-32-110928  
Start Time: 25-OCT-2011 07:58 Sample Time: 28-SEP-2011 00:00 Energy Offset: -2.78447E-01  
Real Time : 0 01:00:28.80 Sample ID : 1109167-08 Energy Slope : 9.99940E-01  
Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00



Channel Contents for DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916708\_GE3\_GAS1102\_1697

Channel

1:	0	0	0	0	0	0	0	0
9:	10	154	150	105	110	109	102	109
17:	101	76	89	96	75	64	83	92
25:	74	78	67	70	87	72	65	65
33:	68	74	74	80	91	85	85	93
41:	87	80	93	94	112	154	240	105
49:	95	117	91	101	105	116	115	109
57:	120	137	121	152	143	146	208	281
65:	137	147	131	162	133	155	175	158
73:	189	228	526	261	653	501	143	135
81:	137	128	116	183	186	149	213	280
89:	148	227	163	158	300	178	116	97
97:	104	100	94	100	96	94	81	87
105:	101	96	87	91	100	86	105	85
113:	112	81	86	103	88	78	78	97
121:	87	88	80	79	104	92	82	112
129:	116	108	86	102	90	70	82	77
137:	88	82	86	91	87	78	84	93
145:	87	83	93	81	70	77	88	81
153:	80	99	99	69	70	87	73	85
161:	58	77	67	67	65	71	82	74
169:	62	63	78	80	78	74	60	57
177:	61	73	64	88	66	69	75	65
185:	80	202	196	78	51	66	64	65
193:	57	65	58	82	64	62	68	65
201:	62	83	63	68	69	75	65	65
209:	90	83	65	53	59	46	56	51
217:	60	54	42	51	50	38	43	51
225:	58	64	46	60	60	59	68	44
233:	59	59	34	55	50	114	482	139
241:	66	190	153	41	45	47	52	35
249:	47	39	35	43	46	46	41	49
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345:	27	29	23	27	38	29	86	517
353:	391	42	29	37	23	18	22	28
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393:	21	25	30	20	17	27	27	23
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537:	14	12	10	13	14	13	14	11
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553:	19	18	11	9	14	9	21	12
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585:	31	13	9	11	11	12	12	11
593:	10	14	7	8	20	16	10	9
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609:	185	375	79	14	15	15	7	18
617:	9	14	18	11	5	15	7	8
625:	9	6	12	9	16	17	11	9
633:	17	5	16	8	16	9	13	8
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793:	7	6	23	17	8	4	12	10
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833:	6	6	12	14	16	15	17	12
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873:	9	6	7	11	7	9	4	6
881:	9	10	10	8	4	5	12	8
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929:	15	5	5	6	11	15	21	8
937:	9	10	6	6	12	7	7	13
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953:	2	8	4	5	6	6	8	7
961:	5	8	1	14	17	13	15	11
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977:	5	3	7	6	11	7	6	8
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993:	6	8	8	9	3	9	6	2
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1033:	4	7	4	8	3	4	9	10
1041:	5	9	3	4	7	6	5	8
1049:	2	7	7	7	9	7	8	5
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1065:	8	7	5	6	5	8	6	6
1073:	3	7	5	7	8	11	5	6
1081:	7	8	7	9	8	5	12	6
1089:	9	8	5	5	9	12	8	3
1097:	7	8	10	2	13	7	12	10
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1121:	70	32	9	7	10	6	11	6
1129:	9	8	4	6	5	6	6	11
1137:	11	9	4	13	3	7	9	10
1145:	9	4	9	8	2	9	11	6
1153:	11	9	8	16	13	6	5	6
1161:	6	10	9	8	3	9	4	10
1169:	8	8	4	5	9	10	4	9
1177:	7	7	4	8	5	7	7	8
1185:	7	3	7	6	7	6	10	12
1193:	12	7	5	7	7	6	7	5
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1225:	6	11	6	6	7	7	11	10
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1321:	5	4	2	6	3	4	7	6
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1337:	2	5	3	3	3	2	2	4
1345:	5	1	8	3	4	3	1	1
1353:	3	5	3	5	3	3	4	2
1361:	5	9	3	2	7	2	2	4
1369:	1	3	3	1	1	2	2	2
1377:	6	24	11	4	6	3	4	4
1385:	4	7	9	4	1	3	1	2

1393:	0	3	9	3	3	3	3	4
1401:	7	8	7	6	6	0	5	10
1409:	11	5	4	3	4	2	4	3
1417:	6	4	2	3	4	2	0	3
1425:	7	3	4	2	2	3	2	1
1433:	2	2	5	1	0	3	5	2
1441:	1	3	4	1	5	3	2	2
1449:	1	3	4	3	2	2	1	3
1457:	2	2	8	79	218	221	64	13
1465:	4	2	4	1	5	1	4	3
1473:	10	3	2	2	1	2	1	4
1481:	1	1	1	3	1	3	6	3
1489:	1	1	1	2	4	2	3	3
1497:	3	3	1	4	1	3	1	2
1505:	3	1	1	1	8	9	9	0
1513:	3	1	4	4	2	2	1	1
1521:	2	1	2	6	1	4	3	1
1529:	3	2	3	1	2	2	1	1
1537:	3	1	3	5	4	6	1	2
1545:	1	1	4	4	1	0	1	1
1553:	2	2	2	5	2	2	2	4
1561:	2	0	2	0	1	5	3	2
1569:	3	2	1	3	1	4	2	1
1577:	5	1	1	5	4	1	5	7
1585:	2	2	2	2	2	8	1	5
1593:	3	3	7	7	2	1	2	2
1601:	3	2	2	1	0	4	0	0
1609:	2	0	0	2	1	1	2	1
1617:	1	2	2	3	1	2	3	1
1625:	1	0	2	3	3	1	2	1
1633:	2	1	1	1	0	1	2	4
1641:	1	0	2	3	1	4	2	3
1649:	0	2	2	1	2	1	1	3
1657:	1	2	0	1	3	4	2	2
1665:	2	2	1	2	1	2	0	2
1673:	1	0	2	0	3	2	2	0
1681:	1	0	0	1	2	3	1	1
1689:	2	1	1	4	2	3	2	3
1697:	1	0	0	1	2	2	2	0
1705:	0	1	2	3	1	2	1	2
1713:	2	0	0	4	0	0	0	1
1721:	1	1	0	3	0	0	2	2
1729:	3	12	3	2	2	1	1	1
1737:	0	0	2	5	1	2	2	3
1745:	3	1	2	0	0	1	0	2
1753:	1	1	0	0	3	0	1	2
1761:	1	2	6	19	36	32	9	4
1769:	1	1	2	1	1	0	2	1
1777:	0	2	0	0	2	1	2	2
1785:	0	0	0	1	3	1	0	0
1793:	3	2	2	0	1	0	1	2
1801:	2	0	0	4	1	1	0	2
1809:	0	2	2	1	2	0	3	0
1817:	0	0	1	0	2	0	1	1
1825:	1	0	2	4	1	2	0	0
1833:	0	2	4	1	1	0	1	0
1841:	0	0	1	1	1	2	2	10
1849:	5	2	0	2	3	1	1	0
1857:	0	2	0	0	2	0	2	1
1865:	1	0	2	0	0	1	1	0

1873:	0	0	1	0	2	0	0	0
1881:	0	0	2	1	2	0	1	1
1889:	0	1	1	0	0	1	0	1
1897:	0	0	1	0	2	0	2	2
1905:	0	0	0	3	0	1	3	1
1913:	1	3	3	1	1	0	0	2
1921:	2	5	3	0	0	4	4	3
1929:	2	0	1	2	2	0	0	2
1937:	0	0	0	1	1	0	0	0
1945:	0	0	3	1	1	1	0	1
1953:	0	0	0	1	3	0	0	1
1961:	1	1	0	1	1	4	2	1
1969:	0	0	4	2	0	0	1	2
1977:	2	0	1	2	1	1	0	0
1985:	0	1	1	1	0	1	1	4
1993:	1	1	2	2	0	1	0	1
2001:	1	1	1	3	0	0	0	1
2009:	0	1	0	2	0	0	1	0
2017:	2	0	3	0	1	2	1	2
2025:	3	2	0	0	0	0	0	0
2033:	0	0	1	1	1	0	0	0
2041:	0	0	0	2	0	1	1	1
2049:	1	4	0	0	0	1	2	1
2057:	1	4	0	0	0	0	1	1
2065:	0	1	1	2	1	2	0	0
2073:	0	2	0	0	1	2	2	0
2081:	0	1	0	0	0	0	3	1
2089:	0	1	0	0	1	0	0	1
2097:	0	0	0	1	0	0	2	1
2105:	2	5	1	2	2	1	1	0
2113:	0	0	1	2	0	4	4	3
2121:	3	0	1	0	1	0	2	0
2129:	0	0	0	0	0	0	2	1
2137:	0	0	0	2	1	2	1	0
2145:	0	0	0	0	0	0	2	0
2153:	1	0	3	0	2	1	0	0
2161:	2	0	0	0	0	0	2	0
2169:	0	0	0	0	0	0	0	2
2177:	2	0	2	0	0	1	0	0
2185:	0	1	2	0	1	2	2	1
2193:	1	1	0	0	0	0	2	0
2201:	0	1	1	2	7	6	4	2
2209:	0	1	2	1	0	0	1	1
2217:	2	0	0	0	0	0	0	0
2225:	0	0	2	1	2	1	0	2
2233:	1	1	0	3	1	0	0	0
2241:	2	0	0	1	0	1	0	0
2249:	0	0	2	1	1	1	0	0
2257:	2	0	0	1	0	1	1	1
2265:	0	0	3	0	1	1	0	1
2273:	1	1	1	1	1	1	1	1
2281:	0	0	0	0	0	0	0	0
2289:	1	0	3	2	2	2	3	0
2297:	1	0	1	1	0	0	2	0
2305:	0	3	1	0	0	0	1	0
2313:	1	0	1	2	1	1	0	4
2321:	0	0	0	0	0	1	3	1
2329:	1	1	1	1	0	0	2	0
2337:	0	0	0	0	1	1	1	0
2345:	2	1	0	1	1	0	1	0

2353:	2	1	1	0	0	1	0	0
2361:	0	0	2	1	0	0	1	1
2369:	1	0	1	0	1	1	0	1
2377:	1	0	1	1	1	1	0	1
2385:	0	0	0	1	1	0	0	0
2393:	1	0	0	0	0	1	0	3
2401:	1	1	0	1	2	1	0	1
2409:	0	2	0	0	0	0	1	1
2417:	1	0	0	0	1	1	0	0
2425:	2	1	0	3	1	1	0	0
2433:	1	0	1	0	0	0	0	2
2441:	0	0	0	2	0	0	0	3
2449:	0	3	1	0	1	2	0	0
2457:	0	3	0	0	1	0	0	2
2465:	0	0	1	1	0	1	1	3
2473:	0	0	0	0	0	1	1	1
2481:	0	1	0	0	0	0	0	1
2489:	1	0	1	0	0	0	0	1
2497:	1	0	0	1	1	0	0	2
2505:	0	1	0	1	0	1	0	0
2513:	0	0	0	1	0	0	0	0
2521:	0	0	1	0	1	0	1	1
2529:	0	0	0	0	1	0	0	0
2537:	0	1	0	0	2	0	0	0
2545:	1	0	0	0	0	1	0	1
2553:	0	0	1	0	0	0	0	0
2561:	0	0	0	0	0	1	1	1
2569:	0	0	0	0	0	1	0	0
2577:	1	0	0	0	1	0	0	0
2585:	0	0	0	0	0	1	0	0
2593:	0	0	0	1	0	0	0	0
2601:	1	0	2	0	0	0	1	1
2609:	0	1	1	1	3	7	22	16
2617:	9	1	0	1	1	1	0	0
2625:	0	0	0	1	0	0	0	0
2633:	1	0	0	0	0	0	0	0
2641:	0	2	0	0	0	0	1	0
2649:	2	1	0	0	0	1	0	0
2657:	1	0	0	1	0	0	1	0
2665:	0	0	0	0	0	0	1	1
2673:	0	2	0	1	2	0	0	0
2681:	0	1	0	0	0	1	0	0
2689:	0	0	1	0	0	1	1	0
2697:	0	0	0	0	0	0	0	0
2705:	0	0	0	1	1	0	0	0
2713:	0	1	1	1	0	0	0	0
2721:	0	0	0	0	0	0	1	0
2729:	0	0	0	0	0	0	0	0
2737:	0	0	1	1	0	0	0	0
2745:	1	0	0	0	0	1	0	0
2753:	0	1	0	0	1	0	0	0
2761:	0	0	0	1	0	0	1	0
2769:	0	1	1	0	0	1	0	0
2777:	0	0	1	0	0	0	0	0
2785:	0	0	0	2	0	1	0	0
2793:	2	0	0	0	1	0	0	0
2801:	0	0	0	0	0	0	0	0
2809:	1	1	0	0	0	0	0	0
2817:	0	0	0	0	0	0	0	0
2825:	0	0	0	0	0	0	1	1

2833:	0	0	0	0	1	0	0	1
2841:	1	0	0	0	0	0	0	0
2849:	1	0	0	0	0	0	0	0
2857:	0	0	0	1	2	0	2	0
2865:	0	0	0	0	0	0	0	0
2873:	0	1	0	0	1	0	0	0
2881:	0	0	0	0	0	0	0	0
2889:	0	0	0	0	0	0	0	0
2897:	0	0	0	1	1	0	0	0
2905:	0	0	0	0	0	0	0	0
2913:	0	1	0	0	0	0	0	0
2921:	1	0	0	0	0	1	1	0
2929:	0	0	1	0	0	0	0	1
2937:	0	1	0	2	0	0	0	0
2945:	0	0	0	0	0	0	0	0
2953:	0	0	0	0	0	0	0	0
2961:	0	0	0	0	0	0	0	1
2969:	0	0	0	0	1	0	0	0
2977:	0	0	0	1	0	0	0	1
2985:	0	0	0	0	0	0	0	0
2993:	0	0	1	0	0	0	0	0
3001:	0	0	0	0	0	0	0	0
3009:	0	0	0	0	0	1	2	0
3017:	0	0	0	0	1	0	0	0
3025:	1	0	0	0	0	0	0	0
3033:	0	0	0	0	0	0	0	0
3041:	0	0	0	0	0	0	0	0
3049:	2	1	0	0	0	1	1	0
3057:	0	0	0	0	1	0	0	0
3065:	0	0	0	0	0	0	0	0
3073:	0	0	0	0	0	0	0	0
3081:	0	0	1	0	0	0	0	0
3089:	1	0	0	0	0	0	0	0
3097:	0	0	0	0	1	0	0	0
3105:	0	0	1	0	0	0	0	0
3113:	2	0	0	0	0	0	2	0
3121:	0	0	0	0	0	0	1	0
3129:	0	0	0	0	0	0	0	0
3137:	1	0	0	0	0	0	0	0
3145:	0	0	1	0	0	0	0	0
3153:	0	0	0	0	0	0	0	0
3161:	0	0	1	0	0	0	0	0
3169:	0	0	0	0	0	1	0	0
3177:	3	0	0	0	0	1	0	0
3185:	0	0	0	0	0	0	1	0
3193:	0	0	0	0	0	2	0	1
3201:	0	0	0	0	0	0	0	1
3209:	0	1	0	0	0	0	0	0
3217:	0	0	0	0	0	0	0	0
3225:	0	0	1	0	1	0	0	0
3233:	0	0	0	1	0	0	0	0
3241:	0	0	0	0	0	0	0	0
3249:	0	0	0	1	0	0	0	1
3257:	0	0	1	0	0	1	0	0
3265:	0	0	0	0	0	0	0	0
3273:	0	0	0	0	0	0	1	2
3281:	0	1	0	0	0	0	0	0
3289:	0	0	0	0	0	0	0	0
3297:	0	0	0	0	0	0	0	0
3305:	0	0	0	0	0	0	0	0



3313:	0	1	0	0	0	0	0	0
3321:	1	0	0	0	0	0	0	0
3329:	0	0	0	1	1	0	0	0
3337:	0	0	0	0	0	0	0	0
3345:	0	0	0	0	0	0	0	1
3353:	1	0	1	0	0	0	1	0
3361:	0	0	0	0	0	0	0	0
3369:	0	0	0	1	0	0	0	1
3377:	0	1	0	0	1	0	0	0
3385:	0	0	0	0	0	0	0	0
3393:	2	0	0	0	0	1	0	0
3401:	0	0	0	0	0	0	0	0
3409:	0	0	0	0	0	0	0	0
3417:	0	1	0	0	0	0	0	0
3425:	0	0	0	0	0	1	1	0
3433:	0	0	0	0	0	0	0	1
3441:	0	0	1	0	0	0	1	0
3449:	0	0	0	0	0	0	1	1
3457:	0	0	0	1	0	0	0	0
3465:	0	0	0	0	0	0	0	1
3473:	0	0	0	0	0	0	0	0
3481:	0	0	0	0	1	0	0	0
3489:	0	0	0	1	0	0	0	0
3497:	0	0	0	0	1	0	0	0
3505:	0	1	0	0	0	0	0	0
3513:	1	0	0	0	0	0	1	0
3521:	0	1	0	0	0	0	0	0
3529:	0	0	0	0	2	0	1	0
3537:	0	0	0	0	0	0	0	0
3545:	0	0	0	0	0	0	0	0
3553:	0	1	0	0	0	0	0	1
3561:	0	0	0	0	0	0	0	0
3569:	0	1	0	0	0	0	1	0
3577:	0	1	0	1	0	0	0	0
3585:	0	1	0	0	0	0	1	0
3593:	0	0	0	0	0	0	0	0
3601:	0	0	0	1	0	0	0	0
3609:	0	0	0	0	0	1	0	0
3617:	0	0	1	0	0	0	0	1
3625:	0	0	0	0	0	1	0	0
3633:	0	0	1	0	0	0	0	0
3641:	1	0	0	0	0	0	0	0
3649:	0	0	0	0	0	0	0	0
3657:	0	0	0	0	0	0	0	0
3665:	0	0	0	1	0	0	0	0
3673:	0	0	1	0	0	0	1	0
3681:	0	0	0	0	0	0	0	0
3689:	0	0	0	1	0	0	0	0
3697:	0	0	0	0	0	0	0	0
3705:	0	1	0	1	0	0	0	0
3713:	0	0	0	1	1	0	0	0
3721:	1	0	0	1	0	1	0	0
3729:	0	0	0	1	0	0	0	0
3737:	0	0	0	0	0	0	0	1
3745:	1	0	0	0	0	0	1	0
3753:	0	0	1	0	0	1	0	0
3761:	0	0	1	0	0	0	0	0
3769:	0	0	1	0	0	0	1	0
3777:	0	0	0	0	0	1	0	0
3785:	0	0	0	0	0	0	1	1

3793:	0	0	0	0	1	0	0	0
3801:	0	0	0	0	0	0	0	0
3809:	0	0	1	1	0	0	0	0
3817:	0	0	0	0	0	0	0	0
3825:	0	0	0	0	1	0	0	0
3833:	0	0	1	0	0	0	0	1
3841:	0	0	0	0	0	0	0	0
3849:	0	0	0	0	1	0	0	0
3857:	0	0	0	1	0	1	0	0
3865:	0	0	0	1	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	1	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	0	0	0	0	0	0	1	0
3905:	0	0	0	0	0	0	0	0
3913:	0	0	0	0	0	0	0	1
3921:	0	0	0	0	1	0	0	0
3929:	0	0	0	0	0	0	0	0
3937:	1	0	0	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0
3953:	1	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	0	1	0	0	0	0	0
3985:	0	1	1	0	1	0	0	0
3993:	0	0	0	0	0	0	0	0
4001:	1	0	0	0	0	0	0	0
4009:	0	1	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	0	0	0	0
4033:	0	0	1	0	0	0	0	0
4041:	0	0	0	0	0	0	0	0
4049:	0	0	1	0	0	0	0	0
4057:	0	0	0	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	1
4081:	0	0	0	0	0	0	0	0
4089:	0	0	0	1	0	0	0	0

Sample ID : 1109167-09

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VAX/VMS Peak Search Report Generated 25-OCT-2011 09:50:18.96

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Configuration : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916709\_GE1\_GAS1102\_169784.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : JB-48-31-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 08:49:39  
 Sample ID : 1109167-09 Sample Quantity : 5.51690E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE1 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.84 0.1%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
1	46.43*	224	571	1.50	46.06	43	14	36.7	4.05E+00	PB-210
1	53.24	92	661	1.51	52.86	43	14	85.5		
0	76.82*	1959	2366	2.90	76.45	71	12	11.0		
0	89.13	133	1292	1.15	88.76	85	6	87.6		CD-109
0	93.05*	222	1025	1.35	92.68	90	6	49.8		
0	186.50*	349	678	1.32	186.15	183	7	27.4		RA-226
0	209.92	75	438	2.99	209.57	207	6	91.4		
2	239.00*	722	363	1.93	238.66	234	16	11.7	6.03E+00	PB-212
2	242.38	576	334	1.85	242.04	234	16	14.8		RA-224
0	257.65	82	510	3.33	257.32	252	10	106.2		
5	295.50*	916	226	1.51	295.18	291	14	8.3	1.58E+00	PB-214
5	300.01	112	307	2.65	299.69	291	14	67.2		PB-212
0	339.01	141	406	1.97	338.69	334	10	56.3		AC-228
0	352.13*	1603	437	1.56	351.82	347	10	7.0		PB-214
0	462.61	38	139	2.66	462.32	459		7108.2		
0	511.01*	67	235	2.18	510.73	506	11	96.3		
1	580.08	51	84	2.01	579.82	577	11	68.9	3.50E+00	
1	583.45*	239	91	1.99	583.18	577	11	18.5		TL-208
0	609.48*	1171	177	1.64	609.22	604	10	7.3		BI-214
3	665.62	29	78	2.50	665.38	657	15	116.3	1.58E+00	
0	768.30	108	125	1.51	768.07	764	9	41.9		
0	786.36	45	62	1.64	786.14	783	6	63.4		
0	821.64	19	50	1.86	821.43	819		6125.5		
0	839.08	36	98	4.18	838.87	835		11110.7		
0	853.06	17	45	1.72	852.86	851		5130.3		
0	911.43	157	67	1.93	911.24	909	7	23.5		AC-228
0	934.49	61	70	2.11	934.30	930	7	52.2		
0	969.87*	64	88	1.79	969.68	966	8	58.3		AC-228
0	1006.10	49	119	8.15	1005.93	998		15103.3		
0	1120.20	270	123	1.93	1120.05	1114	12	20.5		BI-214
0	1157.72	84	215	12.45	1157.57	1144	27	99.7		
5	1233.19	14	29	2.72	1233.07	1231	19	119.0	1.95E+00	
5	1238.25	108	66	3.43	1238.12	1231	19	35.0		
0	1281.23	41	47	4.52	1281.11	1277	9	67.9		
0	1377.63	77	39	2.38	1377.54	1372	11	38.9		
0	1386.34	15	27	2.24	1386.24	1383		7121.6		

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0193

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
5	1402.40	23	24	3.53	1402.31	1398	13	94.3	3.51E+00	
5	1407.69	40	20	2.37	1407.60	1398	13	49.8		
0	1460.70*	874	45	2.37	1460.61	1455	13	7.5		K-40
0	1508.64	38	27	2.85	1508.57	1503	10	61.7		
0	1620.90	16	3	3.09	1620.85	1617	7	64.1		
0	1629.41	13	2	1.42	1629.36	1625	9	70.7		
0	1661.49	21	4	1.42	1661.45	1659	6	54.0		
1	1689.26	12	0	2.52	1689.23	1687	19	50.0	1.48E+00	
1	1693.26	14	0	2.52	1693.23	1687	19	68.0		
1	1725.80	8	4	2.46	1725.77	1724	10	69.9	1.12E+01	
1	1728.79	69	6	2.53	1728.77	1724	10	25.6		
0	1764.56*	235	15	2.32	1764.54	1760	12	15.0		BI-214
0	1776.47	8	4	2.73	1776.46	1773		6113.0		
0	1815.61	15	0	2.97	1815.60	1811	9	51.6		
0	1848.64	22	15	2.29	1848.64	1843	9	76.3		
0	1855.41	9	5	3.23	1855.41	1852		9113.1		
0	1870.67	7	3	3.42	1870.67	1868		6119.5		
0	1999.69	7	2	3.40	1999.72	1996	7	95.4		
0	2049.71	6	3	2.71	2049.75	2046		6122.5		
4	2099.48	5	5	3.54	2099.54	2097	10	126.2	1.05E+00	
4	2103.96	11	3	3.54	2104.01	2097	10	76.6		
0	2118.66	11	4	1.90	2118.71	2114	7	82.6		
0	2203.35	77	3	3.22	2203.43	2198	11	24.2		BI-214
0	2386.52	11	0	5.87	2386.64	2382	10	60.3		
0	2447.19	21	6	1.85	2447.32	2441	11	60.4		
0	2613.60*	69	0	2.23	2613.76	2610	10	25.3		TL-208

Summary of Nuclide Activity  
Sample ID : 1109167-09

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Total number of lines in spectrum 62  
Number of unidentified lines 35  
Number of lines tentatively identified by NID 27 43.55%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.219E+01	2.219E+01	0.266E+01	12.01	
TL-208	1.41E+10Y	1.00	8.750E-01	8.750E-01	1.485E-01	16.97	
PB-210	22.26Y	1.00	2.883E+00	2.890E+00	1.089E+00	37.67	
PB-212	1.41E+10Y	1.00	1.115E+00	1.115E+00	0.162E+00	14.56	
BI-214	1602.00Y	1.00	3.855E+00	3.855E+00	0.339E+00	8.81	
PB-214	1602.00Y	1.00	3.791E+00	3.791E+00	0.320E+00	8.43	
RA-224	1.41E+10Y	1.00	9.982E+00	9.982E+00	1.731E+00	17.34	
RA-226	1602.00Y	1.00	6.281E+00	6.281E+00	11.63E+00	185.19	
AC-228	1.41E+10Y	1.00	1.005E+00	1.005E+00	0.217E+00	21.64	
Total Activity :			5.197E+01	5.198E+01			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	1.655E+00	1.724E+00	1.525E+00	88.42	
Total Activity :			1.655E+00	1.724E+00			

Grand Total Activity : 5.363E+01 5.370E+01

Flags: "K" = Keyline not found "M" = Manually accepted  
"E" = Manually edited "A" = Nuclide specific abn. limit

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr 2-Sigma			Status
				pCi/GRAM	pCi/GRAM	%Error	
K-40	1460.81	10.67*	5.027E-01	2.219E+01	2.219E+01	12.01	OK
Final Mean for 1 Valid Peaks = 2.219E+01+/- 2.665E+00 ( 12.01%)							
TL-208	583.14	30.22*	1.029E+00	1.048E+00	1.048E+00	21.08	OK
	860.37	4.48	7.505E-01	-----	Line Not Found	-----	Absent
	2614.66	35.85	3.563E-01	7.324E-01	7.324E-01	27.40	OK
Final Mean for 2 Valid Peaks = 8.750E-01+/- 1.485E-01 ( 16.97%)							
PB-210	46.50	4.05*	2.613E+00	2.883E+00	2.890E+00	37.67	OK
Final Mean for 1 Valid Peaks = 2.890E+00+/- 1.089E+00 ( 37.67%)							
PB-212	238.63	44.60*	2.000E+00	1.102E+00	1.102E+00	14.79	OK
	300.09	3.41	1.716E+00	2.614E+00	2.614E+00	67.81	OK
Final Mean for 2 Valid Peaks = 1.115E+00+/- 1.624E-01 ( 14.56%)							
BI-214	609.31	46.30*	9.927E-01	3.468E+00	3.468E+00	12.46	OK
	1120.29	15.10	6.104E-01	3.986E+00	3.986E+00	22.39	OK
	1764.49	15.80	4.432E-01	4.567E+00	4.568E+00	17.47	OK
	2204.22	4.98	3.885E-01	5.440E+00	5.440E+00	26.07	OK
Final Mean for 4 Valid Peaks = 3.855E+00+/- 3.395E-01 ( 8.81%)							
PB-214	295.21	19.19	1.736E+00	3.741E+00	3.742E+00	12.33	OK
	351.92	37.19*	1.529E+00	3.836E+00	3.836E+00	11.55	OK
Final Mean for 2 Valid Peaks = 3.791E+00+/- 3.197E-01 ( 8.43%)							
RA-224	240.98	3.95*	1.987E+00	9.982E+00	9.982E+00	17.34	OK
Final Mean for 1 Valid Peaks = 9.982E+00+/- 1.731E+00 ( 17.34%)							
RA-226	186.21	3.28*	2.308E+00	6.281E+00	6.281E+00	185.19	OK
Final Mean for 1 Valid Peaks = 6.281E+00+/- 1.163E+01 (185.19%)							
AC-228	338.32	11.40	1.575E+00	1.069E+00	1.069E+00	57.07	OK
	911.07	27.70*	7.170E-01	1.078E+00	1.078E+00	25.17	OK
	969.11	16.60	6.829E-01	7.653E-01	7.653E-01	58.96	OK
Final Mean for 3 Valid Peaks = 1.005E+00+/- 2.174E-01 ( 21.64%)							

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Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CD-109	88.03	3.72*	2.931E+00	1.655E+00	1.724E+00	88.42	OK

Final Mean for 1 Valid Peaks = 1.724E+00+/- 1.525E+00 ( 88.42%)

Flag: "\*" = Keyline

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.219E+01	2.665E+00	6.637E-01	5.628E-02	33.428
CD-109	1.724E+00	1.525E+00	1.805E+00	2.097E-01	0.955
TL-208	8.750E-01	1.485E-01	1.987E-01	1.838E-02	4.403
PB-210	2.890E+00	1.089E+00	1.425E+00	1.100E-01	2.027
PB-212	1.115E+00	1.624E-01	1.214E-01	9.939E-03	9.186
BI-214	3.855E+00	3.395E-01	1.410E-01	1.311E-02	27.344
PB-214	3.791E+00	3.197E-01	1.634E-01	1.352E-02	23.196
RA-224	9.982E+00	1.731E+00	1.380E+00	1.130E-01	7.233
RA-226	6.281E+00	1.163E+01	1.823E+00	3.338E+00	3.445
AC-228	1.005E+00	2.174E-01	3.153E-01	2.506E-02	3.186

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.987E-01		4.829E-01	8.778E-01	7.739E-02	0.226
NA-22	1.355E-02		5.556E-02	8.955E-02	7.329E-03	0.151
AL-26	1.484E-02		2.738E-02	5.440E-02	4.345E-03	0.273
TI-44	-9.557E-02		4.869E-02	6.900E-02	5.406E-03	-1.385
SC-46	3.490E-02		5.367E-02	9.942E-02	7.957E-03	0.351
V-48	-8.368E-03		1.517E-01	2.653E-01	2.144E-02	-0.032
CR-51	1.508E-01		7.014E-01	1.147E+00	9.998E-02	0.131
MN-54	-8.999E-03		4.846E-02	7.524E-02	6.384E-03	-0.120
CO-56	4.963E-02		6.212E-02	9.032E-02	7.576E-03	0.549
CO-57	-1.894E-02		4.111E-02	6.640E-02	6.409E-03	-0.285
CO-58	-5.382E-02		5.759E-02	9.392E-02	8.159E-03	-0.573
FE-59	-4.180E-02		1.268E-01	2.159E-01	1.925E-02	-0.194
CO-60	5.346E-02		5.715E-02	9.823E-02	8.031E-03	0.544
ZN-65	-5.813E-02		1.325E-01	1.955E-01	1.602E-02	-0.297
SE-75	-5.724E-02		7.753E-02	1.100E-01	9.030E-03	-0.520
RB-82	-7.121E-01		7.408E-01	1.050E+00	9.336E-02	-0.678
RB-83	1.124E-01		1.003E-01	1.730E-01	2.744E-02	0.650
KR-85	1.706E+01		9.449E+00	1.792E+01	1.614E+00	0.952
SR-85	9.947E-02		5.509E-02	1.045E-01	9.408E-03	0.952
Y-88	-1.585E-02		4.061E-02	6.864E-02	5.452E-03	-0.231
NB-93M	-4.067E+00		1.047E+00	4.331E-02	9.637E-03	-93.911
NB-94	2.065E-02		4.531E-02	8.227E-02	6.726E-03	0.251
NB-95	2.080E-01		9.580E-02	1.718E-01	1.538E-02	1.211
NB-95M	6.730E+01		3.209E+01	5.172E+01	4.235E+00	1.301
ZR-95	-7.870E-03		9.704E-02	1.708E-01	1.681E-02	-0.046
RU-103	-2.265E-02		6.095E-02	1.062E-01	1.524E-02	-0.213
RU-106	-9.875E-03		3.851E-01	6.845E-01	9.458E-02	-0.014
AG-108M	-4.719E-02		4.593E-02	7.479E-02	6.848E-03	-0.631
AG-110M	1.232E-02		4.572E-02	7.500E-02	7.004E-03	0.164
SN-113	8.571E-03		6.067E-02	1.090E-01	9.246E-03	0.079
TE123M	-3.308E-03		5.099E-02	8.292E-02	6.864E-03	-0.040
SB-124	-5.429E-02		6.138E-02	8.992E-02	8.354E-03	-0.604
I-125	-1.560E-01		7.395E-01	1.240E+00	1.125E-01	-0.126



---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-125	6.244E-02		1.245E-01	2.264E-01	1.961E-02	0.276
SB-126	-1.342E-01		3.488E-01	5.999E-01	5.499E-02	-0.224
SN-126	2.340E-01		1.222E-01	1.918E-01	1.906E-02	1.220
SB-127	-1.205E+01		1.320E+01	2.174E+01	2.019E+00	-0.554
I-129	-9.967E-02		7.120E-02	1.132E-01	1.188E-02	-0.881
I-131	-3.063E-02		4.216E-01	7.509E-01	6.204E-02	-0.041
BA-133	2.054E-01		7.652E-02	1.299E-01	1.686E-02	1.581
CS-134	-4.212E-02		4.613E-02	6.735E-02	6.272E-03	-0.625
CS-135	1.441E-01		2.413E-01	3.990E-01	3.248E-02	0.361
CS-136	-9.395E-03		2.529E-01	4.422E-01	3.725E-02	-0.021
CS-137	9.109E-02		4.865E-02	9.415E-02	8.806E-03	0.968
LA-138	6.191E-02		6.264E-02	1.244E-01	1.022E-02	0.498
CE-139	1.489E-03		5.306E-02	8.645E-02	6.910E-03	0.017
BA-140	5.081E-01		6.414E-01	1.155E+00	3.842E-01	0.440
LA-140	-3.568E-02		1.791E-01	3.117E-01	2.557E-02	-0.114
CE-141	-4.152E-03		1.349E-01	2.191E-01	5.174E-02	-0.019
CE-144	3.672E-03		3.474E-01	5.688E-01	5.257E-02	0.006
PM-144	1.037E-02		4.134E-02	7.453E-02	6.902E-03	0.139
PM-145	1.184E-02		1.606E-01	2.714E-01	1.767E-01	0.044
PM-146	-2.072E-02		8.644E-02	1.454E-01	1.261E-02	-0.143
ND-147	-7.598E-02		1.375E+00	2.453E+00	2.227E-01	-0.031
EU-152	7.145E-01	+	3.648E-01	6.991E-01	7.403E-02	1.022
GD-153	-1.217E-01		1.551E-01	2.483E-01	2.429E-02	-0.490
EU-154	3.510E-02		1.540E-01	2.477E-01	2.028E-02	0.142
EU-155	2.039E-01		1.693E-01	2.344E-01	2.300E-02	0.870
EU-156	-1.183E+00		1.479E+00	2.404E+00	5.496E-01	-0.492
HO-166M	1.179E-02		7.518E-02	1.344E-01	1.236E-02	0.088
HF-172	1.214E-01		3.024E-01	5.021E-01	4.777E-02	0.242
LU-172	9.104E-01		1.217E+00	2.285E+00	1.869E-01	0.398
LU-173	2.412E-01		1.963E-01	3.309E-01	2.689E-02	0.729
HF-175	1.712E-02		7.245E-02	9.544E-02	7.892E-03	0.179
LU-176	3.771E-03		4.059E-02	6.064E-02	4.976E-03	0.062
TA-182	2.037E+00	+	4.561E-01	6.570E-01	5.378E-02	3.101
IR-192	5.205E-02		9.792E-02	1.635E-01	1.432E-02	0.318
HG-203	-5.943E-02		7.287E-02	1.126E-01	9.410E-03	-0.528
BI-207	6.251E-03		3.780E-02	6.783E-02	6.249E-03	0.092
BI-210M	-2.914E-02		8.276E-02	1.206E-01	9.836E-03	-0.242
PB-211	3.388E-01		1.238E+00	2.229E+00	1.853E-01	0.152
BI-212	3.460E-01		3.676E-01	6.841E-01	6.253E-02	0.506
RN-219	9.818E-02		5.377E-01	9.655E-01	8.004E-02	0.102
RA-223	-1.109E+00		9.424E-01	1.408E+00	1.161E-01	-0.787
RA-225	2.051E-01		4.218E-01	6.697E-01	5.605E-02	0.306
TH-227	1.262E+00		3.899E-01	6.386E-01	5.229E-02	1.975
TH-230	-3.014E+01		1.266E+01	1.758E+01	1.374E+00	-1.714
PA-231	1.313E+00		1.681E+00	2.613E+00	2.141E-01	0.502
TH-231	-2.902E-01		3.675E-01	6.034E-01	7.375E-02	-0.481
PA-233	-4.114E-02		1.894E-01	3.017E-01	6.729E-02	-0.136
PA-234	1.980E-01		1.698E-01	2.864E-01	2.670E-02	0.691

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234M	2.683E+00		5.413E+00	9.913E+00	8.035E-01	0.271
TH-234	1.213E+00		1.071E+00	1.852E+00	1.372E-01	0.655
U-235	-6.735E-02		3.468E-01	5.602E-01	9.877E-02	-0.120
NP-237	4.947E-01		4.109E-01	5.687E-01	5.582E-02	0.870
AM-241	-2.295E-01		1.187E-01	1.688E-01	1.195E-02	-1.360
AM-243	5.903E-01		9.159E-02	1.380E-01	1.175E-02	4.277
CM-243	5.877E-02		2.657E-01	4.332E-01	3.511E-02	0.136

Total number of lines in spectrum 62  
Number of unidentified lines 35  
Number of lines tentatively identified by NID 27 43.55%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.219E+01	2.219E+01	0.266E+01	12.01	
TL-208	1.41E+10Y	1.00	8.750E-01	8.750E-01	1.485E-01	16.97	
PB-210	22.26Y	1.00	2.883E+00	2.890E+00	1.089E+00	37.67	
PB-212	1.41E+10Y	1.00	1.115E+00	1.115E+00	0.162E+00	14.56	
BI-214	1602.00Y	1.00	3.855E+00	3.855E+00	0.339E+00	8.81	
PB-214	1602.00Y	1.00	3.791E+00	3.791E+00	0.320E+00	8.43	
RA-224	1.41E+10Y	1.00	9.982E+00	9.982E+00	1.731E+00	17.34	
RA-226	1602.00Y	1.00	6.281E+00	6.281E+00	11.63E+00	185.19	
AC-228	1.41E+10Y	1.00	1.005E+00	1.005E+00	0.217E+00	21.64	
Total Activity :			5.197E+01	5.198E+01			

Nuclide Type : FISSION

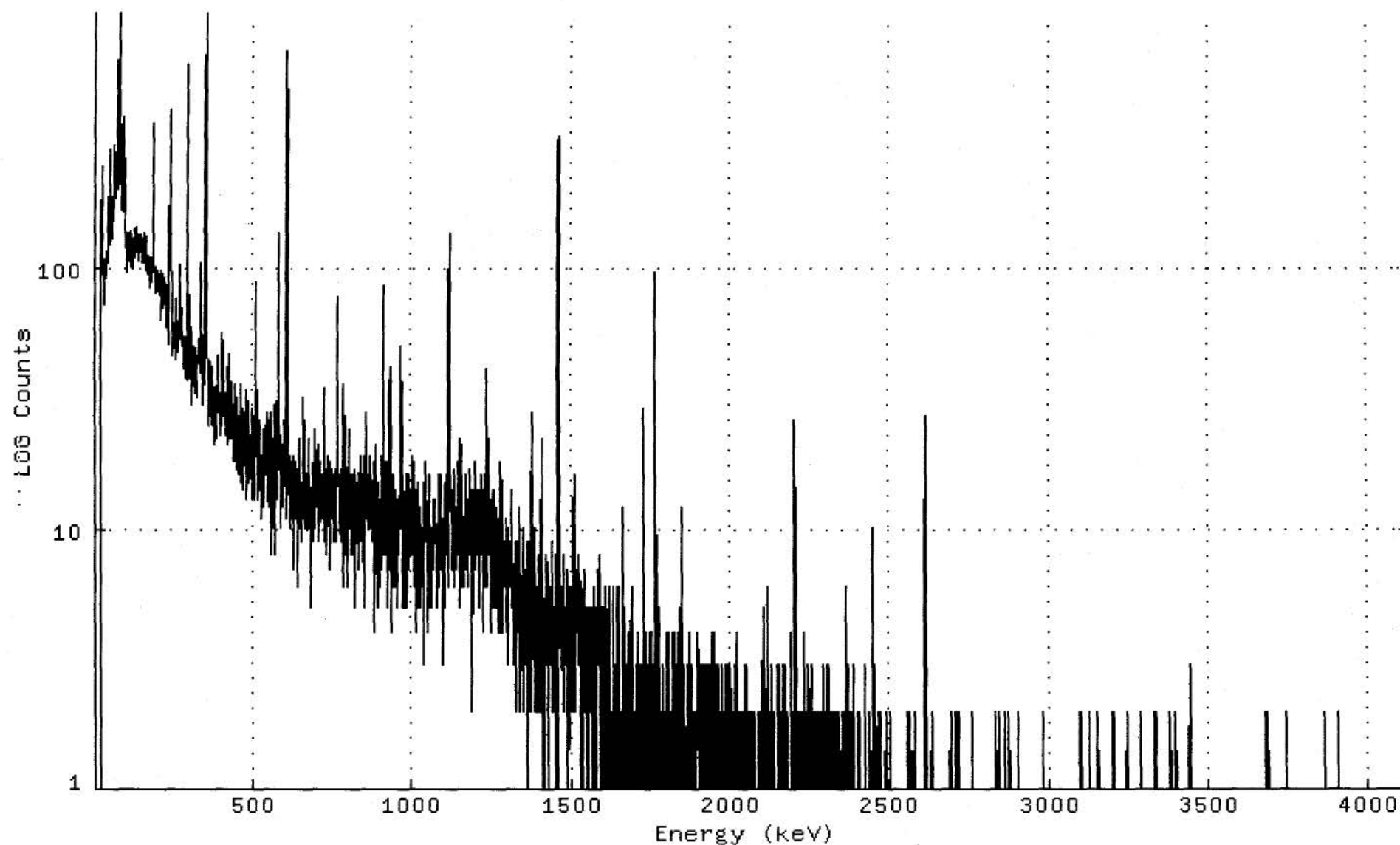
Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	1.655E+00	1.724E+00	1.525E+00	88.42	
Total Activity :			1.655E+00	1.724E+00			

Grand Total Activity : 5.363E+01 5.370E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916709\_GE1\_GAS1102\_169784.CNF;1  
Title :  
Sample Title: JB-48-31-110928  
Start Time: 25-OCT-2011 08:49 Sample Time: 28-SEP-2011 00:00 Energy Offset: 3.84457E-01  
Real Time : 0 01:00:01.84 Sample ID : 1109167-09 Energy Slope : 9.99792E-01  
Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00



## Channel

1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0
17:	0	0	96	167	167	200	244	146
25:	143	97	95	108	92	72	90	103
33:	100	92	98	109	100	115	103	111
41:	122	104	105	129	124	285	227	123
49:	145	147	146	161	188	150	131	130
57:	148	152	168	190	187	208	295	259
65:	203	186	214	228	192	223	200	204
73:	234	438	623	414	951	387	229	210
81:	252	204	167	267	178	196	353	259
89:	183	256	164	257	381	182	148	130
97:	136	132	120	137	117	96	125	116
105:	138	134	122	136	130	107	118	125
113:	139	107	118	101	119	125	126	131
121:	100	100	113	138	120	118	112	111
129:	142	118	129	143	124	115	117	134
137:	107	112	134	117	114	117	125	121
145:	135	116	120	124	130	109	105	114
153:	126	138	110	122	114	104	122	114
161:	122	116	98	133	111	105	111	107
169:	102	112	95	111	91	88	96	106
177:	84	91	95	94	110	89	93	96
185:	143	361	176	114	107	96	93	99
193:	90	80	95	93	95	87	89	82
201:	98	91	82	83	92	83	79	86
209:	98	98	89	63	72	88	74	70
217:	94	78	77	79	82	81	77	73
225:	91	82	74	59	70	70	69	51
233:	71	61	71	91	88	345	405	116
241:	177	374	140	67	60	60	46	51
249:	53	49	57	50	56	56	58	65
257:	68	68	76	45	50	48	50	50
265:	62	51	56	60	73	103	90	54
273:	62	57	70	56	57	58	52	48
281:	42	55	54	53	41	43	38	48
289:	50	51	55	37	55	151	607	292
297:	55	64	76	79	54	53	42	33
305:	39	48	38	59	30	41	47	43
313:	41	50	50	33	37	37	43	49
321:	38	32	36	34	40	40	40	54
329:	54	43	45	49	47	46	44	40
337:	59	104	89	35	49	51	30	42
345:	36	41	36	41	64	65	451	970
353:	276	53	52	46	51	39	27	25
361:	45	36	34	30	27	36	44	40
369:	32	32	31	42	25	28	30	32
377:	27	33	27	21	35	22	24	26
385:	35	32	27	46	37	30	34	28
393:	31	33	23	33	24	29	29	25
401:	32	56	27	27	39	41	27	29
409:	53	31	34	31	23	33	31	30
417:	28	25	37	42	29	26	21	30
425:	22	31	37	22	47	29	28	34

433:	35	27	22	24	28	22	25	18
441:	30	24	30	29	36	18	35	30
449:	18	19	17	19	23	25	27	20
457:	26	26	16	23	29	36	35	23
465:	15	23	29	22	27	21	14	21
473:	24	26	24	28	22	31	23	25
481:	34	21	13	17	16	29	31	21
489:	23	18	23	17	21	21	18	13
497:	22	22	22	16	29	23	13	17
505:	26	15	27	19	37	68	88	45
513:	27	23	26	17	27	13	34	20
521:	19	24	15	14	19	11	14	19
529:	14	17	18	12	20	21	18	17
537:	24	24	25	19	17	20	16	22
545:	13	18	28	17	13	12	16	13
553:	20	26	12	13	10	19	8	28
561:	16	22	14	21	22	10	20	21
569:	18	30	17	8	25	20	15	13
577:	14	25	25	39	17	51	137	83
585:	21	21	23	10	18	16	11	16
593:	14	12	18	16	21	18	26	16
601:	23	15	19	11	15	18	22	166
609:	683	353	41	28	24	17	15	12
617:	18	13	10	19	16	17	11	18
625:	18	18	14	12	10	7	13	13
633:	19	14	18	13	17	11	16	14
641:	11	16	6	17	14	18	10	22
649:	17	16	13	15	14	9	15	14
657:	9	13	16	20	32	29	16	18
665:	26	26	10	16	22	10	10	12
673:	13	10	13	21	22	10	14	14
681:	16	13	11	5	7	9	14	14
689:	10	11	15	9	16	20	11	10
697:	24	11	16	14	20	16	20	12
705:	18	21	11	13	18	20	9	12
713:	18	18	15	17	13	15	14	11
721:	16	14	15	10	11	24	35	21
729:	9	12	17	11	13	15	8	13
737:	12	12	15	16	19	12	18	10
745:	11	7	9	17	11	14	11	12
753:	15	16	14	9	14	14	11	12
761:	13	17	14	9	12	17	31	77
769:	39	17	15	16	16	12	11	10
777:	10	9	10	16	11	17	13	12
785:	23	36	17	6	8	11	8	11
793:	9	17	27	11	14	6	9	10
801:	13	10	14	13	13	24	17	13
809:	11	10	13	8	16	13	12	16
817:	10	11	8	15	17	10	9	10
825:	5	15	14	10	15	10	14	10
833:	13	8	7	13	14	19	12	18
841:	9	10	12	9	11	9	8	16
849:	11	5	8	10	19	16	9	13
857:	12	11	15	28	14	10	16	15
865:	11	12	14	12	15	15	19	13
873:	10	10	9	15	11	12	13	18
881:	14	12	11	14	4	11	13	10
889:	10	21	9	11	5	13	12	5
897:	15	10	6	13	10	13	10	16
905:	19	17	8	14	7	47	86	46

913:	16	14	8	10	11	18	9	11
921:	8	9	5	12	12	18	9	10
929:	7	13	7	9	33	42	23	4
937:	16	11	11	10	9	6	14	11
945:	16	8	8	9	6	14	13	9
953:	9	6	11	5	13	11	10	8
961:	13	8	10	18	20	10	11	30
969:	50	27	8	12	5	12	12	11
977:	12	6	5	6	12	16	11	5
985:	15	5	13	13	16	7	15	9
993:	9	13	13	11	13	8	14	11
1001:	17	19	11	9	8	10	6	18
1009:	11	11	11	4	8	13	4	9
1017:	14	5	10	15	12	9	9	12
1025:	10	11	5	11	7	7	10	9
1033:	6	7	6	8	15	3	8	7
1041:	10	13	12	12	11	9	18	9
1049:	10	4	9	9	9	6	5	7
1057:	16	8	9	10	6	5	9	8
1065:	9	7	9	11	7	13	9	11
1073:	9	13	9	11	11	7	5	9
1081:	8	5	9	12	9	16	8	6
1089:	9	16	10	9	10	7	9	11
1097:	10	7	9	3	11	9	5	11
1105:	15	9	11	10	13	16	11	8
1113:	12	6	12	12	11	14	72	137
1121:	71	17	13	16	12	11	10	7
1129:	9	7	14	6	14	17	9	10
1137:	9	7	12	7	9	9	9	8
1145:	9	10	12	18	13	5	6	10
1153:	16	17	22	20	7	15	6	15
1161:	10	11	8	7	6	7	9	14
1169:	11	7	8	16	11	11	13	12
1177:	6	10	7	16	10	9	14	8
1185:	17	10	5	11	14	11	2	11
1193:	5	12	7	14	9	16	7	18
1201:	11	11	10	10	9	8	14	12
1209:	13	5	9	5	10	14	11	11
1217:	16	13	11	14	8	10	4	9
1225:	14	14	12	6	16	8	7	11
1233:	10	14	6	17	37	41	29	17
1241:	13	9	8	12	13	11	13	7
1249:	4	7	11	5	14	7	9	10
1257:	12	14	6	13	10	5	5	7
1265:	7	7	9	12	6	4	9	11
1273:	9	8	7	6	5	13	4	14
1281:	18	13	9	8	4	6	5	9
1289:	6	7	8	8	9	4	6	9
1297:	11	7	8	7	5	6	5	3
1305:	10	6	8	6	9	9	6	7
1313:	14	9	5	6	5	5	5	3
1321:	4	4	6	9	5	7	9	2
1329:	9	4	6	6	5	9	7	5
1337:	12	5	6	2	11	4	5	5
1345:	3	6	4	2	6	2	2	10
1353:	3	7	6	7	3	5	5	6
1361:	4	1	4	9	6	2	2	2
1369:	9	4	2	5	6	4	4	10
1377:	28	28	13	7	5	5	2	8
1385:	10	7	6	7	2	6	2	2

1393:	4	3	8	5	2	3	4	7
1401:	8	13	2	8	7	8	14	22
1409:	8	0	6	6	4	5	1	3
1417:	4	5	6	7	6	3	5	8
1425:	7	2	3	1	2	4	3	6
1433:	4	6	6	6	6	3	9	4
1441:	2	4	3	2	5	3	3	4
1449:	5	8	6	1	3	7	1	5
1457:	5	25	100	304	322	116	22	12
1465:	9	4	3	3	5	4	6	4
1473:	2	6	3	2	8	3	5	4
1481:	3	5	4	3	7	5	5	1
1489:	7	1	2	3	2	6	5	5
1497:	3	3	6	4	2	2	3	4
1505:	4	2	8	11	16	12	3	2
1513:	4	6	4	7	5	6	4	6
1521:	3	4	3	6	3	8	5	2
1529:	1	4	3	1	1	2	1	3
1537:	4	5	7	2	3	5	4	5
1545:	4	3	3	1	5	4	1	2
1553:	3	5	5	4	4	5	2	4
1561:	3	4	3	3	5	2	1	1
1569:	1	2	6	3	2	2	1	3
1577:	5	5	3	3	7	4	7	3
1585:	5	3	5	8	5	1	5	5
1593:	5	4	5	2	0	3	3	2
1601:	1	3	5	3	5	3	2	1
1609:	3	6	4	2	4	2	4	1
1617:	1	0	3	6	5	4	0	0
1625:	0	1	2	1	2	6	2	1
1633:	0	1	2	1	3	2	0	3
1641:	0	4	1	1	1	6	6	2
1649:	0	4	1	1	0	2	2	1
1657:	1	1	1	5	6	12	1	0
1665:	1	3	1	3	5	2	2	0
1673:	2	3	2	2	2	0	4	1
1681:	1	2	2	0	2	0	0	4
1689:	5	0	5	2	6	4	1	1
1697:	1	2	2	1	2	2	3	2
1705:	0	0	2	0	4	1	0	0
1713:	3	1	0	1	1	1	2	3
1721:	2	1	2	1	0	5	2	12
1729:	29	13	1	4	0	0	0	1
1737:	1	0	3	2	2	0	2	2
1745:	4	0	1	3	4	0	2	1
1753:	1	0	2	1	2	1	3	2
1761:	1	4	46	97	67	22	4	4
1769:	2	5	0	1	1	0	5	2
1777:	4	0	1	2	2	0	1	1
1785:	2	1	3	1	2	0	2	0
1793:	2	1	0	1	1	0	4	2
1801:	0	1	2	0	1	1	4	3
1809:	1	0	0	1	2	1	2	3
1817:	4	2	0	0	0	1	1	1
1825:	4	0	1	2	2	1	3	0
1833:	0	1	0	0	4	3	3	0
1841:	5	2	4	0	0	6	9	12
1849:	5	1	0	1	1	3	2	3
1857:	1	1	1	0	1	0	0	0
1865:	2	1	3	0	4	3	1	2



1873:	0	0	3	0	0	1	0	1
1881:	1	2	1	1	1	2	1	1
1889:	1	2	2	0	2	2	2	3
1897:	3	4	3	0	2	3	1	2
1905:	1	3	1	2	2	0	3	3
1913:	0	0	1	1	3	1	3	0
1921:	3	0	1	0	3	0	1	1
1929:	1	0	1	1	3	3	3	2
1937:	0	2	1	0	0	0	2	0
1945:	4	0	4	2	1	3	2	1
1953:	3	1	2	2	3	1	1	0
1961:	1	3	1	1	2	1	0	1
1969:	1	1	0	3	0	1	0	1
1977:	2	1	1	2	0	1	2	1
1985:	2	3	2	0	3	0	2	1
1993:	1	1	0	0	0	2	2	3
2001:	2	0	1	1	0	1	1	0
2009:	0	2	1	1	2	1	1	1
2017:	3	1	0	1	4	1	0	1
2025:	0	1	2	1	0	0	0	0
2033:	0	0	1	2	2	0	0	1
2041:	1	2	1	0	1	0	0	3
2049:	3	3	0	1	3	3	1	2
2057:	0	0	1	2	0	2	2	0
2065:	1	0	0	0	0	2	1	1
2073:	1	2	1	0	0	0	0	1
2081:	0	1	1	0	1	0	0	0
2089:	2	1	2	2	2	0	1	1
2097:	1	1	1	3	0	2	5	0
2105:	5	0	1	3	2	2	1	2
2113:	1	1	0	1	2	5	6	0
2121:	0	0	2	0	1	0	2	1
2129:	1	1	0	3	1	1	1	2
2137:	2	1	0	1	1	1	1	0
2145:	1	1	2	2	3	2	3	1
2153:	0	3	1	0	0	0	1	0
2161:	2	0	1	2	0	0	3	1
2169:	0	1	2	3	0	1	0	2
2177:	1	1	0	1	0	0	1	1
2185:	0	1	0	4	1	2	2	1
2193:	1	1	2	1	1	0	1	1
2201:	3	16	26	16	13	3	1	0
2209:	0	1	1	1	1	1	0	2
2217:	1	0	0	2	0	1	0	0
2225:	2	0	1	0	1	1	2	0
2233:	0	4	1	0	1	1	0	0
2241:	1	0	3	0	1	3	2	0
2249:	1	0	0	2	0	0	2	1
2257:	3	2	0	0	1	1	2	2
2265:	1	2	1	0	1	1	1	0
2273:	2	2	0	0	0	0	1	2
2281:	2	1	1	1	0	0	2	2
2289:	1	0	3	2	2	2	1	0
2297:	1	2	1	0	0	1	1	3
2305:	0	0	0	0	1	0	3	0
2313:	2	0	1	1	1	1	0	1
2321:	0	0	2	1	1	2	1	0
2329:	0	1	0	0	0	2	1	1
2337:	0	0	0	1	2	1	1	0
2345:	1	0	0	1	2	1	2	0

2353:	2	0	1	2	1	1	1	0
2361:	0	2	1	6	2	0	2	2
2369:	2	0	1	3	0	0	2	1
2377:	1	1	1	2	0	0	1	2
2385:	2	0	0	3	2	1	0	0
2393:	0	0	1	1	0	0	0	1
2401:	0	2	1	2	0	0	2	1
2409:	0	1	0	0	1	0	0	0
2417:	0	0	0	1	0	0	1	1
2425:	3	1	0	0	1	1	1	0
2433:	1	0	0	0	0	2	0	1
2441:	1	0	1	1	1	10	7	2
2449:	2	2	0	0	0	1	0	3
2457:	0	1	1	1	0	0	1	0
2465:	1	0	0	2	0	2	1	0
2473:	2	1	1	0	0	0	0	0
2481:	0	0	1	0	0	0	2	0
2489:	0	0	0	1	0	1	1	1
2497:	0	1	0	0	0	2	0	0
2505:	0	0	1	0	0	0	0	1
2513:	0	0	0	1	0	0	0	0
2521:	1	0	0	0	1	0	0	0
2529:	0	0	1	0	0	1	0	0
2537:	1	1	0	0	0	0	0	1
2545:	1	0	0	0	1	0	1	0
2553:	0	0	2	1	0	0	0	0
2561:	0	0	1	2	0	0	1	0
2569:	0	1	0	0	0	0	0	0
2577:	2	0	0	1	0	0	1	0
2585:	1	0	0	0	0	0	1	1
2593:	1	1	0	0	0	0	1	1
2601:	0	0	0	1	0	0	1	0
2609:	0	0	3	8	21	27	8	5
2617:	2	1	0	0	0	0	1	0
2625:	0	1	0	0	0	0	2	0
2633:	0	2	0	0	0	0	0	1
2641:	0	0	0	0	0	0	0	0
2649:	1	0	0	0	0	0	0	0
2657:	1	0	1	0	0	0	1	0
2665:	0	0	0	1	0	0	0	1
2673:	0	0	0	1	1	0	0	1
2681:	0	0	0	0	0	0	0	0
2689:	0	0	2	0	0	0	0	0
2697:	0	0	1	0	0	0	1	0
2705:	0	0	2	0	0	2	0	0
2713:	0	0	1	0	0	2	0	0
2721:	0	0	1	1	0	0	1	0
2729:	0	1	0	1	0	0	0	0
2737:	0	1	0	0	0	0	0	0
2745:	1	0	0	0	1	1	0	0
2753:	0	0	0	0	2	1	0	0
2761:	0	0	0	0	0	0	0	0
2769:	0	0	1	1	0	0	0	0
2777:	0	1	0	0	0	0	0	0
2785:	0	0	0	1	0	0	1	0
2793:	0	0	0	1	1	1	0	0
2801:	0	0	1	0	0	0	0	0
2809:	0	0	0	0	0	0	0	0
2817:	0	0	0	0	1	0	0	0
2825:	0	0	0	0	0	1	0	0

2833:	2	0	1	0	0	0	0	0
2841:	1	1	1	2	0	0	0	0
2849:	0	0	0	1	1	1	0	1
2857:	0	0	0	0	2	0	1	0
2865:	0	1	0	0	1	0	1	0
2873:	0	1	2	0	1	0	0	1
2881:	1	0	0	1	1	0	0	0
2889:	1	0	0	1	1	1	0	0
2897:	0	0	0	0	0	0	0	2
2905:	1	0	0	0	1	0	1	0
2913:	0	1	0	0	0	0	0	0
2921:	0	0	0	0	1	1	0	1
2929:	0	0	0	0	0	0	0	0
2937:	0	1	0	0	0	0	0	0
2945:	0	0	0	0	0	0	0	0
2953:	0	0	1	0	0	1	0	0
2961:	0	0	0	0	0	0	1	0
2969:	1	0	0	0	0	0	0	1
2977:	0	0	0	0	2	0	0	0
2985:	0	1	0	0	1	0	1	0
2993:	1	0	0	0	0	1	0	0
3001:	0	1	0	0	0	0	0	0
3009:	1	0	0	0	1	0	0	0
3017:	0	0	0	1	0	0	0	0
3025:	0	0	0	1	0	0	0	0
3033:	0	0	0	0	1	0	0	1
3041:	0	1	1	0	0	0	1	0
3049:	1	0	0	0	0	0	0	1
3057:	0	0	0	0	0	0	0	0
3065:	0	1	0	0	1	0	0	0
3073:	0	0	0	0	0	0	0	0
3081:	0	0	0	0	1	0	0	0
3089:	1	0	0	0	0	0	1	2
3097:	0	1	0	2	0	0	0	0
3105:	1	0	0	0	0	0	0	1
3113:	0	0	1	0	0	0	0	0
3121:	0	1	0	2	0	0	0	0
3129:	0	0	0	0	0	0	0	0
3137:	0	0	0	0	0	0	0	0
3145:	0	0	2	0	0	2	2	0
3153:	0	0	1	0	0	0	0	0
3161:	0	0	0	0	0	1	0	0
3169:	1	0	0	0	1	0	0	0
3177:	0	0	0	0	1	0	0	1
3185:	0	0	0	0	0	0	0	0
3193:	1	0	0	2	2	1	0	0
3201:	2	0	0	0	0	0	0	0
3209:	0	0	1	0	0	0	0	0
3217:	0	0	0	0	0	0	0	0
3225:	0	0	0	0	0	1	1	0
3233:	1	0	0	0	0	1	0	0
3241:	0	2	0	0	0	0	1	0
3249:	0	0	0	0	0	0	0	0
3257:	0	0	1	0	0	0	0	0
3265:	0	0	0	0	1	0	0	0
3273:	0	0	0	0	0	0	0	0
3281:	0	0	0	0	0	1	0	2
3289:	0	0	0	1	0	0	0	0
3297:	0	0	0	0	0	0	0	0
3305:	0	0	0	0	0	0	0	0

3313:	0	0	0	0	1	0	0	0
3321:	0	0	0	1	1	0	0	0
3329:	2	0	0	0	2	0	1	0
3337:	0	0	0	1	0	0	0	0
3345:	0	0	0	0	0	1	0	1
3353:	0	0	0	0	0	0	1	0
3361:	0	0	0	0	0	0	0	0
3369:	0	0	0	0	0	0	0	0
3377:	0	0	2	0	0	0	0	0
3385:	0	0	0	0	0	0	0	0
3393:	0	0	0	0	2	0	0	0
3401:	0	0	0	1	1	1	0	0
3409:	0	0	0	1	0	0	1	0
3417:	0	0	0	0	0	0	1	0
3425:	0	0	0	1	0	0	0	0
3433:	0	0	0	0	0	0	0	3
3441:	0	0	0	1	0	0	0	0
3449:	0	0	0	0	0	0	0	0
3457:	1	0	0	0	0	1	0	1
3465:	1	0	0	1	0	0	0	0
3473:	0	0	0	0	1	0	0	0
3481:	0	0	1	0	0	0	0	0
3489:	0	0	0	1	0	0	0	0
3497:	0	0	0	1	1	0	0	0
3505:	0	0	1	0	0	0	0	0
3513:	1	0	0	0	0	0	0	0
3521:	0	0	0	0	0	1	0	0
3529:	0	0	0	0	1	0	0	1
3537:	0	0	0	0	0	0	0	0
3545:	0	0	0	0	0	1	0	0
3553:	0	0	0	1	0	0	0	1
3561:	0	0	0	0	0	1	0	0
3569:	1	0	1	1	0	0	0	0
3577:	0	0	0	0	0	0	0	0
3585:	1	1	0	0	0	0	0	0
3593:	0	0	0	1	0	0	0	0
3601:	0	0	0	1	0	0	0	1
3609:	0	0	0	0	0	0	0	0
3617:	0	0	0	0	0	0	0	0
3625:	0	1	0	0	0	0	0	0
3633:	0	0	0	0	0	0	0	0
3641:	0	0	1	0	0	0	0	0
3649:	0	0	0	1	1	0	0	1
3657:	0	0	0	1	0	0	0	0
3665:	0	0	0	0	0	1	0	0
3673:	0	0	1	0	0	2	0	1
3681:	0	0	1	0	2	0	1	0
3689:	1	0	0	0	0	1	0	0
3697:	0	0	0	0	0	0	0	1
3705:	0	0	0	0	0	0	1	0
3713:	0	0	0	0	0	0	1	0
3721:	0	1	1	0	0	0	0	0
3729:	0	1	1	0	0	0	0	0
3737:	0	0	0	0	0	0	2	0
3745:	0	0	0	0	1	0	0	0
3753:	0	0	0	0	0	0	0	0
3761:	0	0	0	0	0	0	0	1
3769:	0	0	0	0	0	0	0	1
3777:	0	0	0	0	0	0	0	0
3785:	0	1	0	0	0	0	1	0

3793:	0	0	1	0	0	0	0	0
3801:	0	1	0	0	0	0	0	0
3809:	0	1	0	0	1	0	0	0
3817:	0	0	0	0	0	0	0	0
3825:	0	0	1	0	0	0	0	0
3833:	0	0	0	1	0	0	0	0
3841:	0	0	0	0	0	0	0	0
3849:	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	0	2	0
3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	0	0	0	0	0	0	2	1
3905:	0	0	0	0	0	0	0	0
3913:	1	0	0	1	0	0	1	0
3921:	0	1	0	0	1	0	0	0
3929:	1	0	0	0	0	0	0	1
3937:	0	1	0	0	0	0	1	0
3945:	0	0	0	0	0	0	1	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	1	0	0	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	1	1	0	0	0	0	0
3985:	0	0	0	0	0	0	0	0
3993:	0	0	0	0	0	0	0	0
4001:	0	0	0	1	1	0	0	0
4009:	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	1
4025:	0	1	0	1	1	0	0	1
4033:	0	0	0	0	0	0	0	0
4041:	0	0	0	0	0	1	0	0
4049:	0	0	0	0	0	0	0	0
4057:	1	0	0	0	0	0	0	1
4065:	0	0	0	0	0	1	0	0
4073:	0	0	0	0	0	0	0	0
4081:	1	0	0	0	0	1	0	0
4089:	0	0	0	1	0	0	0	0

Sample ID : 1109167-10

Page : 1  
Acquisition date : 25-OCT-2011 08:50:58

VAX/VMS Peak Search Report Generated 25-OCT-2011 09:51:39.30

Configuration : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916710\_GE2\_GAS1102\_169785.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : JB-67-31-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 08:50:58  
 Sample ID : 1109167-10 Sample Quantity : 5.76130E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE2 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.77 0.0%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	46.28*	175	1247	1.56	46.23	43	7	70.2		PB-210
0	52.96	78	776	1.54	52.91	52	5	110.0		
0	63.01*	184	1150	1.44	62.97	60	6	60.9		TH-234
1	68.17	57	414	1.44	68.13	67	17	90.4	7.96E+01	
1	75.17	849	848	1.45	75.13	67	17	11.7		AM-243
1	84.17	86	379	1.23	84.13	83	9	58.8	1.81E+01	
1	87.17	332	793	1.48	87.13	83	9	26.2		NP-237 SN-126 CD-109
0	93.58*	259	952	1.36	93.55	91	6	41.6		
0	112.51	108	1069	6.26	112.48	108	9	110.5		
0	128.70	141	858	1.26	128.68	125	8	74.1		
0	169.45	101	767	3.05	169.45	166	8	97.2		
0	185.88*	445	811	1.37	185.88	182	8	24.6		RA-226
0	209.70	122	508	1.40	209.71	206	7	64.5		
0	216.69	87	507	4.90	216.71	213	8	92.2		
10	238.25*	104	423	2.52	238.27	235	12	78.8	5.69E+01	PB-212
10	241.94*	558	324	1.78	241.96	235	12	14.6		RA-224
0	269.41	77	440	1.83	269.44	267	8	96.7		CS-135
0	276.75	54	355	1.26	276.78	274	7	118.0		
0	295.08*	1018	360	1.41	295.12	291	7	8.9		PB-214
1	329.29	51	141	1.98	329.34	327	19	70.5	1.44E+00	
1	338.15*	165	180	1.74	338.21	327	19	29.4		AC-228
0	351.83*	1756	317	1.46	351.89	347	10	6.1		PB-214
0	463.06	66	142	2.20	463.16	460	7	64.7		
0	487.43	56	155	1.89	487.55	484	9	84.4		
3	510.47*	74	123	2.37	510.59	507	14	62.8	2.57E+00	
3	517.70	21	71	1.97	517.82	507	14	147.3		
0	532.52	40	107	1.42	532.65	529	7	91.2		
2	579.24	25	44	2.22	579.38	578	9	75.6	8.11E+00	
2	582.92*	232	90	1.91	583.07	578	9	18.6		
0	608.91*	1309	167	1.61	609.07	604	10	6.7		BI-214
3	665.12	87	82	2.51	665.30	660	20	42.9	2.16E+00	
3	676.20	25	79	2.17	676.38	660	20	122.8		
0	726.80*	50	100	2.46	727.00	723	8	76.2		BI-212
0	767.77	114	165	1.99	767.98	764	14	51.5		

AG  
10/25/11

0212

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	786.06	62	110	2.02	786.29	781	10	68.4		
0	794.36	50	78	2.70	794.59	791	9	70.3		
0	805.12	69	99	1.89	805.35	800	11	61.1		
0	835.45	87	205	16.12	835.70	823	21	84.7		MN-54
0	859.18	28	83	1.24	859.43	855		8120.2		
0	910.47	140	81	1.71	910.75	906	9	28.7		AC-228
0	933.37	52	95	1.97	933.65	930	9	73.5		
6	963.77	75	51	3.66	964.06	960	12	46.2	2.32E+00	
6	968.25*	54	58	2.30	968.54	960	12	56.4		AC-228
0	981.31	22	38	1.94	981.61	978		7102.8		
10	1050.54	13	25	3.20	1050.86	1049		9128.9	5.36E+00	
10	1054.06	19	48	3.86	1054.39	1049		9126.5		
0	1077.37	111	171	14.13	1077.70	1067	26	67.0		
0	1119.63*	286	116	2.23	1119.98	1116	11	18.9		BI-214
0	1153.88	71	52	3.01	1154.25	1149	9	43.5		
0	1236.92*	126	75	2.52	1237.32	1232	10	31.6		
3	1279.32	25	36	2.95	1279.73	1273	19	101.1	1.04E+00	
3	1286.08	19	42	2.96	1286.49	1273		19131.8		
4	1376.48	89	30	3.17	1376.92	1372	19	32.1	1.01E+00	
4	1383.60	32	30	3.32	1384.05	1372	19	77.4		
0	1400.32	41	50	3.19	1400.78	1394	11	72.9		
0	1407.58*	38	39	2.08	1408.04	1405	8	66.2		
4	1453.46	21	21	3.36	1453.93	1437	31	117.3	1.94E+00	
4	1459.80*	731	20	2.42	1460.28	1437	31	7.7		K-40
0	1508.80	26	24	1.41	1509.30	1506	8	72.6		
0	1629.86	15	15	1.72	1630.40	1625	10	109.5		
7	1656.65	7	1	3.59	1657.21	1656	8	83.8	1.80E+00	
7	1660.33	17	12	2.46	1660.88	1656	8	82.3		
0	1682.36	8	5	1.80	1682.92	1680		7124.3		
0	1691.24	16	7	4.05	1691.81	1687	9	75.3		
0	1729.86	34	33	1.37	1730.44	1724	11	74.8		
0	1763.29*	223	17	2.51	1763.89	1758	12	15.5		BI-214
0	1846.67	38	7	2.82	1847.29	1843	11	40.3		
0	1935.99	12	4	2.03	1936.65	1932	10	89.0		
0	2009.07	7	6	2.08	2009.75	2007		7139.7		
0	2017.07	11	4	5.27	2017.76	2013	9	91.1		
0	2034.76	11	0	3.16	2035.45	2031	9	60.3		
0	2102.38	24	4	2.61	2103.10	2099	9	51.0		
0	2117.99	13	6	2.80	2118.72	2113	8	87.2		
0	2162.22	7	2	1.86	2162.96	2158		9108.0		
0	2176.81	10	3	2.72	2177.56	2172	11	89.0		
0	2202.54	72	3	2.86	2203.30	2198	11	25.1		
0	2291.55	5	2	1.80	2292.34	2287		7126.9		
0	2395.56	9	2	1.24	2396.39	2391	9	91.8		
0	2446.41	27	0	4.08	2447.26	2441	12	38.5		
0	2612.59*	67	3	3.91	2613.51	2608	10	27.7		

Total number of lines in spectrum 80  
Number of unidentified lines 42  
Number of lines tentatively identified by NID 38 47.50%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected pCi/GRAM	Decay Corr pCi/GRAM			
K-40	1.28E+09Y	1.00	1.947E+01	1.947E+01	0.262E+01	13.45	
PB-210	22.26Y	1.00	2.559E+00	2.565E+00	1.816E+00	70.79	
BI-212	1.41E+10Y	1.00	7.086E-01	7.086E-01	5.443E-01	76.81	
PB-212	1.41E+10Y	1.00	1.674E-01	1.674E-01	1.327E-01	79.31	
BI-214	1602.00Y	1.00	4.271E+00	4.271E+00	0.387E+00	9.07	
PB-214	1602.00Y	1.00	4.423E+00	4.423E+00	0.377E+00	8.53	
RA-224	1.41E+10Y	1.00	1.020E+01	1.020E+01	0.176E+01	17.27	
RA-226	1602.00Y	1.00	8.421E+00	8.421E+00	15.56E+00	184.79	
AC-228	1.41E+10Y	1.00	1.011E+00	1.011E+00	0.210E+00	20.77	
TH-234	4.47E+09Y	1.00	2.505E+00	2.505E+00	1.542E+00	61.57	
Total Activity :			5.374E+01	5.375E+01			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected pCi/GRAM	Decay Corr pCi/GRAM			
MN-54	312.70D	1.06	1.648E-01	1.751E-01	1.493E-01	85.28	
CS-135	2.30E+06Y	1.00	3.749E-01	3.749E-01	3.640E-01	97.10	
AM-243	7380.00Y	1.00	6.453E-01	6.453E-01	1.068E-01	16.55	
Total Activity :			1.185E+00	1.195E+00			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected pCi/GRAM	Decay Corr pCi/GRAM			
CD-109	464.00D	1.04	4.436E+00	4.621E+00	1.417E+00	30.66	
SN-126	1.00E+05Y	1.00	4.460E-01	4.460E-01	1.339E-01	30.02	
NP-237	2.14E+06Y	1.00	1.309E+00	1.309E+00	0.391E+00	29.90	
Total Activity :			6.191E+00	6.377E+00			

Grand Total Activity : 6.112E+01 6.132E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit



Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr		2-Sigma %Error	Status
				pCi/GRAM	pCi/GRAM		
K-40	1460.81	10.67*	4.582E-01	1.947E+01	1.947E+01	13.45	OK
Final Mean for 1 Valid Peaks = 1.947E+01+/- 2.619E+00 ( 13.45%)							
PB-210	46.50	4.05*	2.204E+00	2.559E+00	2.565E+00	70.79	OK
Final Mean for 1 Valid Peaks = 2.565E+00+/- 1.816E+00 ( 70.79%)							
BI-212	727.17	11.80*	7.716E-01	7.086E-01	7.086E-01	76.81	OK
	1620.62	2.75	4.293E-01	-----	Line Not Found	-----	Absent
Final Mean for 1 Valid Peaks = 7.086E-01+/- 5.443E-01 ( 76.81%)							
PB-212	238.63	44.60*	1.817E+00	1.674E-01	1.674E-01	79.31	OK
	300.09	3.41	1.555E+00	-----	Line Not Found	-----	Absent
Final Mean for 1 Valid Peaks = 1.674E-01+/- 1.327E-01 ( 79.31%)							
BI-214	609.31	46.30*	8.915E-01	4.133E+00	4.133E+00	11.89	OK
	1120.29	15.10	5.508E-01	4.484E+00	4.484E+00	21.39	OK
	1764.49	15.80	4.084E-01	4.507E+00	4.507E+00	18.50	OK
	2204.22	4.98	3.644E-01	-----	Line Not Found	-----	Absent
Final Mean for 3 Valid Peaks = 4.271E+00+/- 3.874E-01 ( 9.07%)							
PB-214	295.21	19.19	1.574E+00	4.391E+00	4.392E+00	12.82	OK
	351.92	37.19*	1.383E+00	4.449E+00	4.449E+00	11.42	OK
Final Mean for 2 Valid Peaks = 4.423E+00+/- 3.772E-01 ( 8.53%)							
RA-224	240.98	3.95*	1.806E+00	1.020E+01	1.020E+01	17.27	OK
Final Mean for 1 Valid Peaks = 1.020E+01+/- 1.762E+00 ( 17.27%)							
RA-226	186.21	3.28*	2.099E+00	8.421E+00	8.421E+00	184.79	OK
Final Mean for 1 Valid Peaks = 8.421E+00+/- 1.556E+01 (184.79%)							
AC-228	338.32	11.40	1.425E+00	1.325E+00	1.325E+00	30.88	OK
	911.07	27.70*	6.445E-01	1.021E+00	1.021E+00	30.34	OK
	969.11	16.60	6.144E-01	6.961E-01	6.961E-01	57.30	OK
Final Mean for 3 Valid Peaks = 1.011E+00+/- 2.100E-01 ( 20.77%)							
TH-234	63.29	3.80*	2.516E+00	2.505E+00	2.505E+00	61.57	OK
Final Mean for 1 Valid Peaks = 2.505E+00+/- 1.542E+00 ( 61.57%)							

Nuclide Type: ACTIVATION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
MN-54	834.83	99.97*	6.905E-01	1.648E-01	1.751E-01	85.28	OK
Final Mean for 1 Valid Peaks = 1.751E-01+/- 1.493E-01 ( 85.28%)							
CS-135	268.24	16.00*	1.682E+00	3.749E-01	3.749E-01	97.10	OK
Final Mean for 1 Valid Peaks = 3.749E-01+/- 3.640E-01 ( 97.10%)							
AM-243	74.67	66.00*	2.598E+00	6.453E-01	6.453E-01	16.55	OK
Final Mean for 1 Valid Peaks = 6.453E-01+/- 1.068E-01 ( 16.55%)							

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CD-109	88.03	3.72*	2.618E+00	4.436E+00	4.621E+00	30.66	OK
Final Mean for 1 Valid Peaks = 4.621E+00+/- 1.417E+00 ( 30.66%)							
SN-126	87.57	37.00*	2.618E+00	4.460E-01	4.460E-01	30.02	OK
Final Mean for 1 Valid Peaks = 4.460E-01+/- 1.339E-01 ( 30.02%)							
NP-237	86.50	12.60*	2.619E+00	1.309E+00	1.309E+00	29.90	OK
Final Mean for 1 Valid Peaks = 1.309E+00+/- 3.914E-01 ( 29.90%)							

Flag: "\*" = Keyline

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	1.947E+01	2.619E+00	6.817E-01	6.989E-02	28.566
MN-54	1.751E-01	1.493E-01	8.443E-02	7.579E-03	2.074
CD-109	4.621E+00	1.417E+00	1.978E+00	3.052E-01	2.337
SN-126	4.460E-01	1.339E-01	1.908E-01	2.697E-02	2.337
CS-135	3.749E-01	3.640E-01	3.774E-01	3.102E-02	0.993
PB-210	2.565E+00	1.816E+00	1.819E+00	1.525E-01	1.410
BI-212	7.086E-01	5.443E-01	6.724E-01	5.935E-02	1.054
PB-212	1.674E-01	1.327E-01	1.384E-01	1.138E-02	1.209
BI-214	4.271E+00	3.874E-01	1.506E-01	1.351E-02	28.368
PB-214	4.423E+00	3.772E-01	1.475E-01	1.292E-02	29.991
RA-224	1.020E+01	1.762E+00	1.573E+00	1.295E-01	6.485
RA-226	8.421E+00	1.556E+01	1.949E+00	3.568E+00	4.322
AC-228	1.011E+00	2.100E-01	3.260E-01	2.932E-02	3.101
TH-234	2.505E+00	1.542E+00	1.718E+00	1.430E-01	1.458
NP-237	1.309E+00	3.914E-01	5.598E-01	7.759E-02	2.339
AM-243	6.453E-01	1.068E-01	1.095E-01	1.200E-02	5.892

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.551E-01		4.808E-01	8.323E-01	7.696E-02	-0.307
NA-22	3.327E-03		5.145E-02	8.128E-02	8.011E-03	0.041
AL-26	2.997E-02		3.585E-02	7.665E-02	6.929E-03	0.391
TI-44	3.095E-02	+	2.816E-02	7.512E-02	7.043E-03	0.412
SC-46	-4.033E-02		5.870E-02	9.688E-02	8.685E-03	-0.416
V-48	7.830E-02		1.586E-01	2.647E-01	2.423E-02	0.296
CR-51	-7.077E-01		7.843E-01	1.204E+00	1.084E-01	-0.588
CO-56	-6.078E-03		6.264E-02	9.766E-02	8.769E-03	-0.062
CO-57	1.780E-02		4.496E-02	7.003E-02	5.939E-03	0.254
CO-58	7.849E-03		6.376E-02	1.019E-01	9.157E-03	0.077
FE-59	2.574E-02		1.338E-01	2.377E-01	2.360E-02	0.108
CO-60	-4.435E-03		5.243E-02	9.227E-02	8.556E-03	-0.048
ZN-65	2.909E-01		1.550E-01	2.735E-01	2.540E-02	1.064
SE-75	-7.446E-03		7.794E-02	1.164E-01	9.643E-03	-0.064
RB-82	-4.491E-01		1.031E+00	1.195E+00	1.067E-01	-0.376
RB-83	4.038E-03		9.909E-02	1.605E-01	2.567E-02	0.025
KR-85	1.218E+01		9.094E+00	1.718E+01	1.591E+00	0.709
SR-85	7.100E-02		5.302E-02	1.002E-01	9.277E-03	0.709
Y-88	-4.906E-02		4.600E-02	6.340E-02	5.659E-03	-0.774
NB-93M	-3.955E+01		1.225E+01	2.873E+00	8.649E-01	-13.766
NB-94	-5.868E-03		5.070E-02	8.775E-02	7.876E-03	-0.067
NB-95	2.869E-01		1.025E-01	1.885E-01	1.680E-02	1.522
NB-95M	9.229E+01		3.544E+01	5.788E+01	4.759E+00	1.594
ZR-95	-7.081E-02		1.003E-01	1.670E-01	1.627E-02	-0.424
RU-103	-4.514E-02		7.065E-02	1.148E-01	1.672E-02	-0.393
RU-106	-3.889E-01		3.972E-01	6.504E-01	8.807E-02	-0.598
AG-108M	7.895E-03		5.419E-02	8.676E-02	7.649E-03	0.091

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AG-110M	-8.211E-03		5.188E-02	8.129E-02	7.033E-03	-0.101
SN-113	-1.022E-02		6.690E-02	1.187E-01	1.093E-02	-0.086
TE123M	9.094E-03		5.319E-02	8.821E-02	7.096E-03	0.103
SB-124	2.745E-02		6.733E-02	1.102E-01	9.926E-03	0.249
I-125	-7.394E-01		1.047E+00	1.758E+00	1.803E-01	-0.421
SB-125	1.598E-02		1.307E-01	2.344E-01	2.175E-02	0.068
SB-126	2.267E-01		3.924E-01	6.566E-01	5.785E-02	0.345
SB-127	8.543E+00		1.601E+01	2.935E+01	2.555E+00	0.291
I-129	7.033E-04		9.715E-02	1.675E-01	2.054E-02	0.004
I-131	-1.126E-01		4.334E-01	7.687E-01	6.786E-02	-0.146
BA-133	9.459E-03		6.431E-02	9.708E-02	1.292E-02	0.097
CS-134	7.510E-02		5.545E-02	9.512E-02	8.580E-03	0.790
CS-136	-1.246E-01		2.882E-01	4.247E-01	4.025E-02	-0.294
CS-137	-1.043E-02		5.575E-02	8.863E-02	7.656E-03	-0.118
LA-138	3.585E-02		5.780E-02	1.048E-01	1.057E-02	0.342
CE-139	-7.904E-03		5.694E-02	8.614E-02	6.858E-03	-0.092
BA-140	-2.087E-01		7.039E-01	1.096E+00	3.651E-01	-0.190
LA-140	9.567E-03		2.225E-01	4.163E-01	4.061E-02	0.023
CE-141	-8.143E-02		1.415E-01	2.289E-01	5.356E-02	-0.356
CE-144	-7.239E-02		3.590E-01	5.466E-01	4.557E-02	-0.132
PM-144	-4.483E-02		4.621E-02	7.565E-02	6.620E-03	-0.593
PM-145	-7.795E-02		2.320E-01	3.845E-01	2.510E-01	-0.203
PM-146	7.152E-02		9.842E-02	1.745E-01	1.606E-02	0.410
ND-147	9.057E-01		1.781E+00	2.965E+00	2.741E-01	0.305
EU-152	7.050E-01	+	4.753E-01	7.943E-01	9.634E-02	0.888
GD-153	-5.530E-02		1.579E-01	2.613E-01	3.046E-02	-0.212
EU-154	5.925E-03		1.425E-01	2.243E-01	2.211E-02	0.026
EU-155	5.395E-01	+	1.613E-01	2.548E-01	3.532E-02	2.117
EU-156	9.366E-01		1.594E+00	2.653E+00	6.096E-01	0.353
HO-166M	-3.446E-02		8.121E-02	1.389E-01	1.220E-02	-0.248
HF-172	9.203E-02		3.350E-01	5.206E-01	4.386E-02	0.177
LU-172	5.127E-01		1.525E+00	2.465E+00	2.286E-01	0.208
LU-173	3.297E-01		2.196E-01	3.188E-01	2.618E-02	1.034
HF-175	9.476E-03		7.418E-02	9.758E-02	8.495E-03	0.097
LU-176	-1.502E-02		4.042E-02	6.433E-02	5.429E-03	-0.233
TA-182	2.309E+00		4.025E-01	7.199E-01	6.681E-02	3.207
IR-192	4.759E-02		1.072E-01	1.778E-01	1.641E-02	0.268
HG-203	2.784E-02		8.245E-02	1.257E-01	1.062E-02	0.222
BI-207	2.810E-03		4.178E-02	7.380E-02	6.752E-03	0.038
TL-208	1.082E+00	+	2.278E-01	3.936E-01	3.582E-02	2.749
BI-210M	-9.793E-02		8.430E-02	1.291E-01	1.062E-02	-0.759
PB-211	-2.349E-01		1.332E+00	2.356E+00	2.125E-01	-0.100
RN-219	2.397E-01		5.915E-01	1.073E+00	9.657E-02	0.223
RA-223	8.401E-01		1.050E+00	1.646E+00	1.411E-01	0.510
RA-225	5.110E-01		5.852E-01	9.509E-01	8.827E-02	0.537
TH-227	1.331E+00		4.267E-01	6.977E-01	5.737E-02	1.908
TH-230	7.896E+00	+	7.182E+00	1.911E+01	1.782E+00	0.413
PA-231	7.203E-03		1.719E+00	2.789E+00	2.344E-01	0.003

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-231	-1.614E-01		4.566E-01	7.804E-01	1.149E-01	-0.207
PA-233	-7.630E-02		2.007E-01	3.180E-01	7.123E-02	-0.240
PA-234	1.084E-01		1.764E-01	2.774E-01	2.320E-02	0.391
PA-234M	4.341E-01		5.477E+00	9.697E+00	8.903E-01	0.045
U-235	2.500E-01		3.516E-01	5.938E-01	1.028E-01	0.421
AM-241	8.078E-02		1.326E-01	1.884E-01	1.409E-02	0.429
CM-243	3.079E-01	+	3.644E-01	4.670E-01	3.830E-02	0.659

Total number of lines in spectrum 80  
Number of unidentified lines 42  
Number of lines tentatively identified by NID 38 47.50%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected pCi/GRAM	Decay Corr pCi/GRAM			
K-40	1.28E+09Y	1.00	1.947E+01	1.947E+01	0.262E+01	13.45	
PB-210	22.26Y	1.00	2.559E+00	2.565E+00	1.816E+00	70.79	
BI-212	1.41E+10Y	1.00	7.086E-01	7.086E-01	5.443E-01	76.81	
PB-212	1.41E+10Y	1.00	1.674E-01	1.674E-01	1.327E-01	79.31	
BI-214	1602.00Y	1.00	4.271E+00	4.271E+00	0.387E+00	9.07	
PB-214	1602.00Y	1.00	4.423E+00	4.423E+00	0.377E+00	8.53	
RA-224	1.41E+10Y	1.00	1.020E+01	1.020E+01	0.176E+01	17.27	
RA-226	1602.00Y	1.00	8.421E+00	8.421E+00	15.56E+00	184.79	
AC-228	1.41E+10Y	1.00	1.011E+00	1.011E+00	0.210E+00	20.77	
TH-234	4.47E+09Y	1.00	2.505E+00	2.505E+00	1.542E+00	61.57	
Total Activity :			5.374E+01	5.375E+01			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected pCi/GRAM	Decay Corr pCi/GRAM			
MN-54	312.70D	1.06	1.648E-01	1.751E-01	1.493E-01	85.28	
CS-135	2.30E+06Y	1.00	3.749E-01	3.749E-01	3.640E-01	97.10	
AM-243	7380.00Y	1.00	6.453E-01	6.453E-01	1.068E-01	16.55	
Total Activity :			1.185E+00	1.195E+00			

Nuclide Type : FISSION

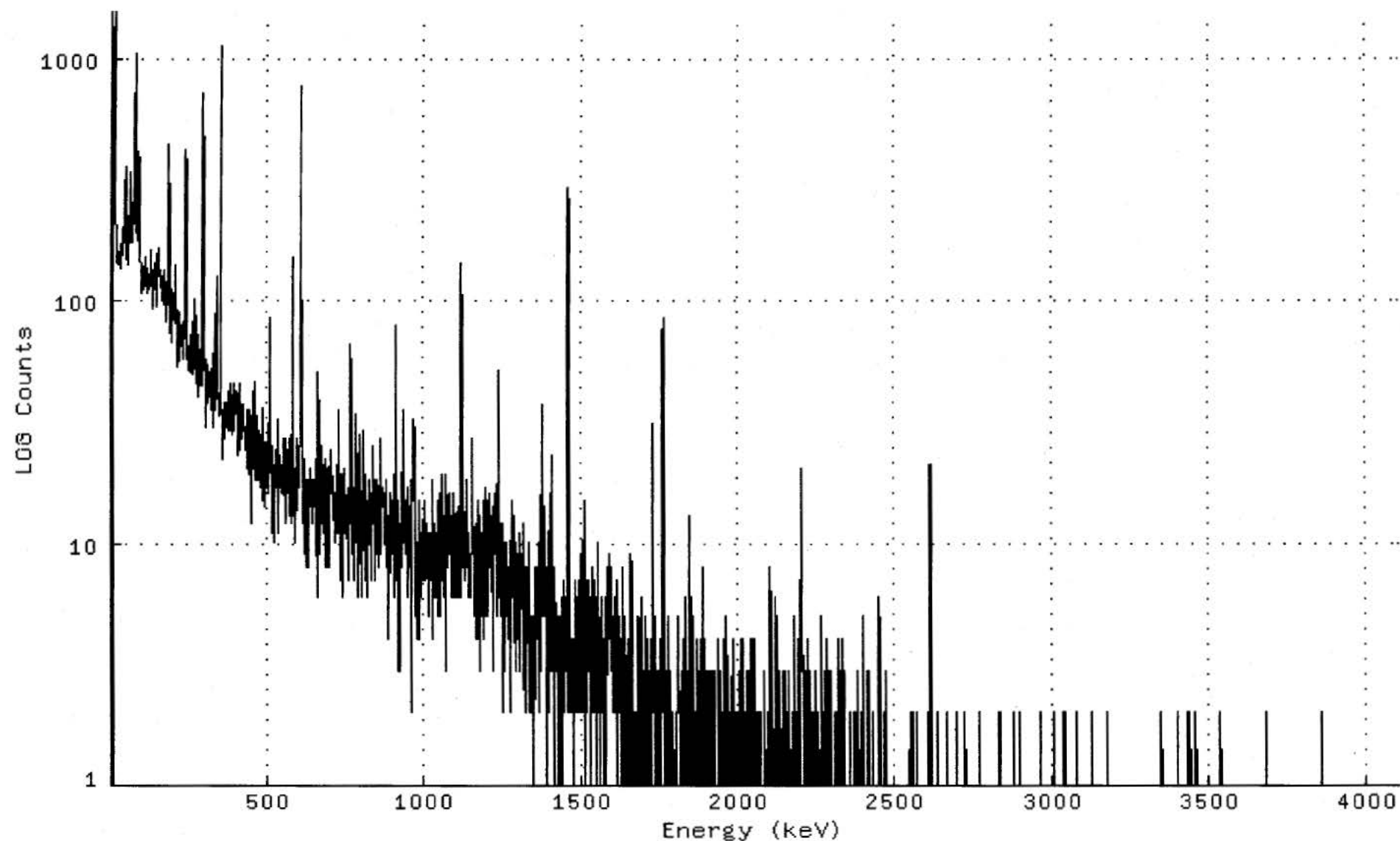
Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
			Uncorrected pCi/GRAM	Decay Corr pCi/GRAM			
CD-109	464.00D	1.04	4.436E+00	4.621E+00	1.417E+00	30.66	
SN-126	1.00E+05Y	1.00	4.460E-01	4.460E-01	1.339E-01	30.02	
NP-237	2.14E+06Y	1.00	1.309E+00	1.309E+00	0.391E+00	29.90	
Total Activity :			6.191E+00	6.377E+00			

Grand Total Activity : 6.112E+01 6.132E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA,SCUSR.ARCHIVE]SMP\_110916710\_GE2\_GAS1102\_169785.CNF;1  
Title :  
Sample Title: JB-67-31-110928  
Start Time: 25-OCT-2011 08:50 Sample Time: 28-SEP-2011 00:00 Energy Offset: 6.87229E-02  
Real Time : 0 01:00:01.77 Sample ID : 1109167-10 Energy Slope : 9.99625E-01  
Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00



## Channel

1:	0	0	0	0	0	0	14	328
9:	823	1333	1145	454	947	1557	246	228
17:	180	164	158	152	142	173	144	159
25:	155	139	145	146	158	142	142	169
33:	171	134	170	162	165	178	166	199
41:	196	175	174	198	191	277	356	173
49:	167	195	158	147	221	196	140	150
57:	164	155	184	209	204	181	334	262
65:	173	203	209	249	209	225	212	207
73:	215	340	714	360	1036	546	202	188
81:	197	194	177	264	180	195	407	307
89:	177	291	174	250	385	205	161	124
97:	106	132	125	113	128	114	111	129
105:	127	137	129	114	140	117	150	135
113:	146	117	134	124	109	106	115	123
121:	119	127	111	116	111	131	134	115
129:	161	120	115	112	93	113	113	133
137:	121	122	132	110	131	121	132	156
145:	122	110	122	94	138	133	132	127
153:	137	164	125	129	116	122	133	116
161:	123	100	125	117	99	99	110	106
169:	131	109	121	97	95	92	99	118
177:	81	105	90	117	95	97	101	121
185:	180	440	205	105	97	115	90	77
193:	67	110	89	94	105	109	105	83
201:	103	104	84	87	92	82	80	82
209:	139	97	79	71	53	69	90	90
217:	69	78	89	56	73	67	65	78
225:	74	78	77	72	82	70	57	73
233:	71	79	69	94	87	295	413	104
241:	208	380	135	69	62	57	64	63
249:	61	51	61	59	50	56	67	51
257:	65	65	81	49	56	54	54	51
265:	53	62	52	62	77	101	75	56
273:	49	45	62	50	83	63	56	50
281:	57	40	53	58	51	59	48	44
289:	62	47	54	63	44	148	713	316
297:	51	54	65	71	61	47	52	47
305:	44	30	57	52	38	47	46	42
313:	44	40	50	49	44	41	42	42
321:	41	35	51	49	52	40	30	48
329:	60	44	49	46	42	40	50	35
337:	62	124	91	40	48	39	44	36
345:	34	39	37	33	37	47	496	1118
353:	213	43	42	27	25	22	24	35
361:	31	30	27	33	35	30	32	38
369:	32	38	35	30	34	32	37	42
377:	29	29	33	35	32	32	35	36
385:	29	45	37	28	37	38	30	31
393:	31	41	37	29	35	45	39	37
401:	36	34	42	37	37	37	23	31
409:	41	35	24	24	34	45	38	27
417:	37	34	34	28	27	30	34	30
425:	33	37	29	35	24	30	26	28



433:	30	29	28	26	20	24	35	28
441:	20	35	24	32	22	19	19	12
449:	23	33	18	30	24	42	28	22
457:	36	32	22	18	26	36	46	32
465:	27	23	18	33	22	31	20	29
473:	18	24	18	19	20	17	21	26
481:	20	28	20	15	23	36	27	25
489:	22	26	23	14	20	20	21	18
497:	17	20	26	18	21	28	31	18
505:	17	27	16	23	40	84	76	44
513:	26	24	21	20	11	23	16	10
521:	12	19	21	13	15	24	17	18
529:	17	19	23	21	24	32	11	16
537:	18	17	20	18	17	23	18	21
545:	20	16	20	19	19	18	19	27
553:	19	16	18	17	14	27	22	12
561:	18	21	20	19	16	24	18	24
569:	24	13	27	16	18	23	19	15
577:	17	12	28	19	19	60	150	49
585:	24	13	18	19	20	11	16	10
593:	18	17	27	15	19	19	20	25
601:	17	21	21	20	30	28	26	232
609:	755	346	29	16	14	12	12	18
617:	22	15	9	14	13	17	8	9
625:	11	16	9	18	9	18	8	13
633:	11	14	19	17	16	20	14	15
641:	15	14	13	15	14	12	18	15
649:	14	18	15	16	17	16	20	22
657:	20	9	13	6	20	17	17	21
665:	50	30	16	18	13	9	17	20
673:	16	12	14	21	25	11	11	12
681:	21	15	18	22	12	8	18	18
689:	11	8	14	15	20	11	19	17
697:	14	8	12	13	20	21	19	23
705:	16	22	24	15	18	17	16	14
713:	15	10	11	10	12	16	16	14
721:	17	15	11	12	16	28	35	25
729:	13	11	13	16	19	7	10	13
737:	16	12	12	6	16	19	15	15
745:	15	14	20	14	11	17	15	14
753:	13	15	13	15	7	10	7	8
761:	10	17	12	14	14	13	30	66
769:	49	12	11	20	12	9	11	11
777:	7	15	17	13	14	17	10	10
785:	34	34	16	17	14	6	12	11
793:	19	17	28	13	11	11	6	11
801:	10	14	16	12	22	29	13	15
809:	14	12	7	14	10	16	19	14
817:	6	13	12	12	15	11	9	11
825:	10	18	18	17	13	12	16	8
833:	7	10	10	20	15	25	16	20
841:	12	18	7	12	11	11	7	15
849:	10	10	11	9	18	8	15	12
857:	10	12	11	27	15	9	10	13
865:	12	17	15	14	14	15	15	14
873:	10	14	16	10	15	12	14	12
881:	8	18	12	10	13	4	9	10
889:	7	8	14	12	12	11	16	14
897:	10	14	9	14	10	13	19	13
905:	11	6	13	18	12	43	79	32

913:	11	7	12	10	15	9	3	8
921:	10	11	3	9	12	8	14	9
929:	9	12	8	11	35	33	15	10
937:	12	10	11	10	12	10	9	15
945:	7	14	9	6	14	17	8	10
953:	8	9	14	9	8	18	5	2
961:	10	12	18	23	31	16	17	32
969:	28	18	5	15	9	6	7	10
977:	4	8	7	6	10	15	10	4
985:	6	9	10	11	6	6	11	7
993:	8	10	11	10	7	11	14	9
1001:	7	13	15	7	8	12	9	8
1009:	12	9	10	5	8	11	10	11
1017:	10	7	11	8	11	7	7	10
1025:	18	10	4	11	6	12	9	12
1033:	7	7	6	10	11	8	11	6
1041:	7	15	8	9	7	5	9	6
1049:	5	16	6	14	10	19	7	16
1057:	9	9	13	6	9	6	13	7
1065:	9	8	3	11	12	17	19	13
1073:	12	8	12	8	9	13	11	10
1081:	16	9	14	12	10	8	6	11
1089:	11	14	6	7	8	8	10	16
1097:	11	10	8	7	6	9	12	6
1105:	7	10	7	13	14	11	9	6
1113:	7	11	15	6	8	26	89	141
1121:	77	17	11	12	8	11	10	7
1129:	9	7	11	10	18	9	11	8
1137:	12	8	8	9	11	6	8	9
1145:	7	9	8	6	6	8	10	14
1153:	9	26	18	27	5	6	10	8
1161:	11	11	9	10	12	9	4	11
1169:	8	6	4	11	15	12	5	3
1177:	13	8	5	9	10	8	7	11
1185:	10	5	8	4	9	10	7	15
1193:	10	10	12	17	5	6	8	9
1201:	11	9	12	5	15	8	9	14
1209:	16	13	8	12	9	8	13	8
1217:	13	3	8	10	10	13	14	12
1225:	10	11	13	16	9	9	9	5
1233:	14	12	13	24	41	51	26	12
1241:	6	10	10	5	9	12	5	5
1249:	8	11	2	12	8	7	3	8
1257:	10	8	9	5	10	6	7	8
1265:	6	7	6	8	4	7	8	2
1273:	5	6	8	5	5	7	15	8
1281:	10	9	7	6	7	7	13	6
1289:	8	5	3	7	10	5	9	9
1297:	7	5	7	6	4	9	3	6
1305:	4	11	7	4	7	6	8	9
1313:	6	6	7	4	9	4	12	3
1321:	2	7	6	2	8	3	5	7
1329:	7	8	7	6	7	5	10	4
1337:	7	2	4	3	5	2	3	4
1345:	4	3	4	5	5	0	5	8
1353:	5	7	5	4	8	4	5	4
1361:	8	4	4	6	10	5	2	3
1369:	3	8	3	3	6	4	9	28
1377:	37	24	7	7	5	8	14	9
1385:	12	8	6	4	4	2	4	1

1393:	8	2	9	5	5	5	8	16
1401:	16	15	5	5	3	8	19	23
1409:	9	3	8	6	5	8	3	1
1417:	8	4	5	3	3	5	4	5
1425:	4	5	1	4	3	5	1	1
1433:	2	4	5	1	3	1	6	4
1441:	6	3	2	5	5	6	7	3
1449:	6	5	3	4	3	11	2	8
1457:	3	34	117	291	235	66	14	5
1465:	5	2	3	4	3	4	4	2
1473:	2	4	3	4	3	1	5	4
1481:	7	2	3	5	6	6	3	4
1489:	6	2	2	7	3	2	7	5
1497:	7	3	3	9	4	2	2	2
1505:	4	3	8	7	15	6	5	5
1513:	1	2	4	7	4	5	3	2
1521:	5	7	3	3	5	6	4	6
1529:	0	6	1	4	8	5	7	7
1537:	2	6	2	5	2	4	7	3
1545:	4	2	6	1	0	4	3	2
1553:	2	6	5	2	10	2	3	1
1561:	3	1	4	6	2	3	5	4
1569:	2	4	4	4	1	2	1	3
1577:	5	2	6	4	1	8	4	5
1585:	4	3	6	7	5	4	6	9
1593:	7	6	4	8	3	4	6	3
1601:	3	2	5	4	3	2	3	2
1609:	2	2	6	0	5	4	7	3
1617:	2	2	3	3	3	5	3	2
1625:	1	3	4	2	2	8	5	4
1633:	1	0	3	1	1	4	5	4
1641:	3	2	2	3	1	3	1	3
1649:	4	2	0	4	2	4	0	0
1657:	4	1	2	9	8	6	0	6
1665:	4	2	1	1	2	0	2	1
1673:	2	1	1	1	2	0	1	0
1681:	1	3	5	2	1	1	1	0
1689:	3	4	6	2	5	2	0	1
1697:	1	2	3	0	1	2	2	5
1705:	2	1	3	0	4	2	4	0
1713:	1	2	3	3	2	2	1	2
1721:	3	1	4	0	1	2	3	9
1729:	31	12	2	2	2	3	5	0
1737:	1	1	4	0	1	1	2	2
1745:	3	1	1	3	0	0	0	3
1753:	2	0	1	1	4	2	4	3
1761:	4	19	68	85	44	13	1	1
1769:	0	0	3	2	1	3	0	3
1777:	1	5	3	1	4	1	1	3
1785:	0	3	1	2	0	2	1	1
1793:	0	1	1	0	0	1	0	2
1801:	1	2	1	2	2	2	4	2
1809:	2	5	3	2	1	2	1	2
1817:	0	3	3	1	0	3	3	2
1825:	2	0	2	3	4	0	6	4
1833:	1	0	1	3	0	1	2	1
1841:	3	0	0	1	3	9	13	9
1849:	4	3	2	1	0	2	3	0
1857:	5	1	2	1	1	1	2	1
1865:	1	0	4	1	2	1	3	1

1873:	2	3	3	2	1	1	0	1
1881:	2	4	1	2	3	5	1	2
1889:	8	0	2	4	1	4	2	3
1897:	3	1	2	1	0	1	0	3
1905:	2	1	3	2	2	1	2	1
1913:	3	0	1	1	3	1	0	1
1921:	1	1	1	0	2	3	0	1
1929:	1	0	1	1	1	1	4	4
1937:	1	1	2	1	0	0	1	3
1945:	1	1	1	2	2	0	2	1
1953:	3	4	4	0	2	5	0	1
1961:	0	1	4	3	2	1	1	1
1969:	3	1	0	2	2	1	0	2
1977:	1	0	1	2	2	4	1	2
1985:	0	2	0	2	1	0	2	1
1993:	2	0	0	0	1	0	2	2
2001:	1	1	2	3	2	2	1	4
2009:	3	2	1	2	0	1	3	2
2017:	4	1	2	2	0	0	0	0
2025:	3	0	1	1	0	0	0	1
2033:	1	1	3	0	4	1	0	0
2041:	0	1	1	1	3	0	1	4
2049:	2	2	2	4	2	1	0	2
2057:	0	1	1	0	1	0	1	1
2065:	2	0	1	2	1	0	1	0
2073:	1	1	1	1	0	1	0	1
2081:	3	1	1	2	0	0	1	1
2089:	0	0	0	2	1	1	2	0
2097:	2	2	0	4	4	2	8	5
2105:	4	1	0	0	0	0	0	1
2113:	1	0	0	3	4	6	5	0
2121:	1	2	2	0	5	0	1	3
2129:	1	1	3	1	2	0	1	1
2137:	1	1	0	3	2	1	1	0
2145:	0	0	2	1	2	0	3	1
2153:	1	0	1	2	0	1	0	1
2161:	0	3	2	1	1	0	0	0
2169:	0	2	0	0	1	1	0	1
2177:	5	0	3	1	1	0	1	0
2185:	0	0	0	2	0	2	4	0
2193:	2	2	1	1	1	0	1	7
2201:	3	12	18	20	7	4	3	0
2209:	0	1	1	3	3	0	3	0
2217:	0	0	1	4	0	1	0	1
2225:	0	0	3	1	0	0	0	2
2233:	0	0	1	2	1	0	1	1
2241:	2	0	0	1	1	1	1	3
2249:	0	1	0	1	1	2	1	1
2257:	1	0	0	0	0	5	0	0
2265:	3	1	1	1	0	2	1	0
2273:	2	1	0	1	0	3	2	1
2281:	0	3	1	0	4	1	0	1
2289:	0	0	3	3	0	0	1	2
2297:	0	1	0	1	0	0	1	0
2305:	0	0	1	0	2	2	1	2
2313:	0	2	1	1	0	2	4	1
2321:	1	3	2	1	0	1	0	1
2329:	1	0	4	3	1	0	3	1
2337:	1	3	0	1	0	1	0	1
2345:	1	1	1	0	1	1	1	1

2353:	2	2	1	1	1	1	0	1
2361:	1	1	0	0	2	1	0	1
2369:	1	0	2	1	0	0	1	0
2377:	2	3	1	2	2	1	0	1
2385:	0	1	0	1	2	0	1	0
2393:	0	1	2	5	0	2	0	0
2401:	0	0	0	0	1	0	0	0
2409:	3	1	1	2	3	0	0	0
2417:	2	1	0	1	1	0	1	0
2425:	1	0	0	2	1	0	0	1
2433:	0	0	1	1	0	0	1	0
2441:	0	1	0	1	2	6	4	6
2449:	4	1	2	0	0	0	0	0
2457:	0	0	0	1	1	1	0	2
2465:	0	0	0	3	1	0	0	0
2473:	1	1	1	0	0	0	0	0
2481:	1	0	0	1	1	1	0	1
2489:	1	1	0	1	0	1	0	0
2497:	0	0	0	0	0	0	0	0
2505:	0	0	0	0	1	0	1	1
2513:	0	0	1	0	0	1	0	0
2521:	0	0	0	0	1	1	0	1
2529:	0	0	0	0	0	1	0	1
2537:	0	1	0	0	0	0	0	0
2545:	1	2	1	0	0	1	0	1
2553:	2	0	2	0	0	0	1	0
2561:	0	0	0	0	0	1	0	0
2569:	2	0	1	0	0	0	1	1
2577:	1	0	0	0	0	1	0	1
2585:	1	0	1	0	1	0	1	1
2593:	0	0	0	1	0	0	1	0
2601:	0	0	2	1	1	0	0	1
2609:	0	0	2	21	16	21	15	3
2617:	0	0	0	1	0	1	0	1
2625:	1	0	0	0	0	0	0	0
2633:	0	0	2	0	1	1	0	0
2641:	0	0	0	0	1	0	0	0
2649:	0	0	0	0	0	1	0	0
2657:	0	0	0	1	0	0	2	0
2665:	0	1	0	0	0	0	0	0
2673:	0	1	1	0	0	0	0	1
2681:	0	0	1	0	0	1	0	0
2689:	0	0	1	0	1	0	2	1
2697:	0	0	0	0	0	0	1	0
2705:	0	0	0	1	0	0	0	0
2713:	1	0	1	1	0	0	0	1
2721:	2	0	0	0	0	0	0	0
2729:	0	0	1	0	0	1	1	0
2737:	0	0	0	0	0	0	0	1
2745:	0	0	1	0	1	1	0	0
2753:	0	1	0	0	1	0	0	0
2761:	0	0	1	0	0	0	0	1
2769:	2	1	0	0	0	0	0	0
2777:	0	0	0	0	1	0	0	0
2785:	0	0	1	0	0	0	0	0
2793:	0	0	0	0	0	0	0	0
2801:	0	0	0	0	0	0	1	0
2809:	0	0	0	0	0	1	1	0
2817:	1	0	0	0	1	0	1	0
2825:	0	0	2	1	0	0	0	0

2833:	2	0	0	0	0	0	0	0	0
2841:	0	0	0	0	0	0	0	0	1
2849:	0	0	0	0	0	0	0	0	0
2857:	1	0	0	0	0	1	0	1	0
2865:	0	0	0	0	0	1	1	0	0
2873:	1	0	0	0	2	0	0	0	1
2881:	0	0	0	0	0	0	1	0	0
2889:	0	1	0	0	1	1	0	0	2
2897:	0	1	0	0	0	0	1	1	0
2905:	0	0	0	0	0	0	1	0	0
2913:	0	0	0	0	0	1	0	0	1
2921:	0	0	0	0	0	0	0	0	0
2929:	0	0	0	0	0	0	0	0	0
2937:	0	0	0	0	1	0	0	0	0
2945:	0	1	0	0	0	0	0	0	0
2953:	0	0	1	0	0	0	0	0	0
2961:	0	0	2	0	0	1	0	1	0
2969:	0	0	0	0	0	0	1	0	0
2977:	0	1	0	0	0	0	0	0	0
2985:	0	0	0	0	0	1	0	0	0
2993:	0	0	0	0	0	0	0	0	0
3001:	0	0	0	0	0	0	2	1	0
3009:	0	0	0	0	0	0	0	0	0
3017:	1	0	0	0	0	1	0	0	0
3025:	0	0	0	0	0	0	0	0	1
3033:	2	1	0	0	0	0	2	0	0
3041:	0	0	0	0	0	0	0	0	0
3049:	1	1	0	0	0	0	0	0	1
3057:	0	0	0	0	0	0	0	0	0
3065:	1	0	0	0	0	0	0	0	0
3073:	0	0	0	2	0	0	0	0	0
3081:	0	0	0	1	0	0	0	0	0
3089:	0	1	0	0	0	0	0	0	0
3097:	0	0	0	0	0	0	0	0	0
3105:	0	0	0	0	0	0	0	0	0
3113:	0	0	0	0	0	0	0	0	0
3121:	1	0	0	0	0	2	2	0	0
3129:	0	0	0	0	0	0	0	0	0
3137:	0	0	0	0	0	0	0	0	0
3145:	0	1	1	0	0	0	0	0	0
3153:	1	0	0	0	0	0	0	0	0
3161:	1	0	0	1	0	0	1	0	0
3169:	0	0	0	0	0	2	0	0	1
3177:	0	1	0	0	0	1	0	0	0
3185:	0	0	0	0	0	0	0	0	0
3193:	0	1	1	0	0	1	0	0	0
3201:	0	1	0	1	0	0	0	0	0
3209:	0	0	0	0	0	0	0	1	1
3217:	0	1	0	1	0	0	0	0	0
3225:	0	0	0	0	0	0	0	0	0
3233:	0	0	0	0	0	0	0	0	0
3241:	0	0	0	0	0	0	0	0	1
3249:	0	1	0	0	0	0	0	0	0
3257:	0	0	0	0	0	0	0	0	1
3265:	0	0	0	0	0	0	0	0	0
3273:	0	0	1	0	0	0	0	0	0
3281:	0	0	0	1	0	0	0	0	0
3289:	1	0	0	0	0	0	0	0	1
3297:	0	0	0	0	0	0	0	0	1
3305:	0	0	0	0	0	0	0	0	0

3313:	0	1	0	0	1	0	0	0
3321:	0	1	0	1	1	0	0	0
3329:	0	0	0	0	0	0	0	0
3337:	0	0	1	0	1	0	1	1
3345:	0	2	0	0	1	0	0	0
3353:	0	0	0	0	1	0	0	0
3361:	0	0	0	0	0	0	0	0
3369:	0	1	1	0	0	0	0	1
3377:	0	0	0	0	0	1	0	0
3385:	0	0	1	0	1	0	1	1
3393:	0	1	0	0	0	0	2	0
3401:	0	0	1	0	0	0	1	1
3409:	0	0	0	0	0	0	0	0
3417:	0	0	0	1	1	0	0	0
3425:	0	0	0	0	0	0	2	0
3433:	0	0	0	0	2	0	0	1
3441:	0	0	0	0	0	0	0	1
3449:	0	0	0	0	0	0	2	0
3457:	1	0	0	0	0	0	0	0
3465:	0	0	0	0	0	0	0	0
3473:	0	0	0	0	0	0	0	0
3481:	0	0	0	0	0	0	0	1
3489:	0	0	0	0	0	0	0	0
3497:	0	0	0	0	0	0	1	1
3505:	1	0	0	1	0	0	0	0
3513:	0	0	0	0	0	0	0	1
3521:	0	0	1	0	0	0	0	0
3529:	0	0	0	0	0	2	0	0
3537:	1	1	0	0	1	0	0	0
3545:	0	0	0	1	0	0	0	0
3553:	0	0	0	0	0	0	0	0
3561:	0	0	0	0	0	0	0	0
3569:	1	1	0	0	0	0	0	0
3577:	0	0	0	0	0	0	0	0
3585:	1	0	0	0	0	0	0	1
3593:	0	0	0	1	0	0	0	1
3601:	0	0	0	0	1	0	0	0
3609:	0	0	0	0	0	1	0	0
3617:	0	0	0	0	0	0	0	0
3625:	0	0	1	0	0	0	0	0
3633:	0	0	0	0	0	0	0	0
3641:	1	0	0	0	1	0	0	0
3649:	0	0	0	0	0	0	0	0
3657:	1	0	0	0	0	0	0	0
3665:	0	0	0	0	0	0	1	1
3673:	0	0	0	0	1	0	2	0
3681:	0	1	0	0	0	0	0	0
3689:	0	0	0	0	0	0	0	0
3697:	0	0	0	0	0	1	0	0
3705:	0	1	0	0	0	0	0	0
3713:	0	0	0	1	0	0	1	0
3721:	0	0	0	0	1	0	1	0
3729:	0	0	0	0	1	0	0	0
3737:	0	0	1	0	0	0	0	0
3745:	1	0	0	0	0	0	1	0
3753:	0	1	0	0	1	1	0	0
3761:	0	0	0	0	0	0	0	1
3769:	0	0	0	0	0	0	0	0
3777:	0	0	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	0

3793:	0	0	0	0	0	0	1	0
3801:	0	0	0	0	1	0	0	0
3809:	0	1	0	0	0	0	1	1
3817:	0	0	0	0	0	0	0	0
3825:	0	0	0	0	1	0	0	0
3833:	0	0	0	0	0	1	0	0
3841:	0	0	0	0	0	0	0	0
3849:	0	0	0	0	2	0	0	0
3857:	0	0	1	0	0	0	1	1
3865:	1	0	0	0	0	0	0	0
3873:	0	0	0	0	0	0	1	0
3881:	1	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	0
3897:	1	1	0	1	1	0	0	0
3905:	0	0	0	0	1	0	1	0
3913:	0	0	0	0	0	0	0	0
3921:	1	0	0	0	0	0	1	0
3929:	0	0	0	0	0	1	0	1
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	1	0	1
3953:	0	0	0	0	0	0	1	0
3961:	0	0	0	0	1	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	0	0	0	0	0	0	0
3985:	0	0	0	0	0	0	1	0
3993:	0	0	0	0	0	0	0	0
4001:	0	0	0	0	1	0	0	0
4009:	1	0	1	0	0	0	0	1
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	0	0	0	0
4033:	0	0	0	0	0	0	0	0
4041:	0	0	0	0	1	0	0	0
4049:	0	0	1	0	0	0	0	1
4057:	0	0	0	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	1	0	0	1	0
4081:	0	0	0	0	0	0	0	1
4089:	1	0	1	0	0	1	1	0



Sample ID : 1109167-11

Page : 1  
Acquisition date : 25-OCT-2011 08:52:56

VAX/VMS Peak Search Report Generated 25-OCT-2011 09:53:37.44

*10/25/11*

Configuration : DKA100: [GAMMA.SCUSR.ARCHIVE] SMP 110916711\_GE4\_GAS1102\_169786.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : JB-68-31-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 08:52:56  
 Sample ID : 1109167-11 Sample Quantity : 6.05540E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE4 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:04.00 0.1%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	45.87*	473	1895	2.32	45.28	41	8	33.3		PB-210
0	52.59*	126	1444	1.59	52.00	50	5	93.1		
0	61.96*	523	3979	2.00	61.37	56	11	47.5		TH-234
6	72.11	272	2413	3.35	71.53	69	14	61.8	1.40E+01	
6	76.13	3026	4364	3.56	75.55	69	14	9.3		AM-243
6	87.09	498	2307	2.07	86.52	82	9	31.8	4.55E+00	NP-237 SN-126 CD-109
0	92.63*	365	2127	1.81	92.06	90	7	44.3		
0	186.12*	949	1724	2.26	185.60	181	10	17.7		RA-226
5	238.32	352	634	2.42	237.82	235	15	23.6	5.27E+00	PB-212
5	241.83	951	920	2.59	241.33	235	15	13.2		RA-224
0	270.22	105	798	1.35	269.73	266	8	95.4		
0	295.00	1580	862	2.09	294.53	289	10	8.6		PB-214
0	337.74	69	444	2.86	337.29	334		7104.5		
0	351.78*	2836	594	2.14	351.34	346	11	5.0		PB-214
0	582.21	135	249	2.24	581.88	578	11	48.1		TL-208
0	609.19*	1881	267	2.40	608.87	602	12	5.8		BI-214
0	665.15	101	151	2.93	664.86	660	10	49.4		
1	768.38	214	110	2.59	768.14	762	19	22.0	1.91E+00	
1	775.24	30	80	2.36	775.00	762	19	113.7		RB-82
0	785.58	69	133	2.83	785.35	780	10	66.7		
0	865.05	28	58	1.48	864.86	863	5	91.7		
0	910.86	55	139	2.56	910.69	906	9	82.2		
0	934.99	58	187	2.80	934.84	929	11	96.2		
0	1073.99	97	117	14.75	1073.90	1065	18	56.1		
0	1120.22	353	138	2.83	1120.16	1114	12	17.0		BI-214
0	1154.60	45	109	2.71	1154.55	1150	11	93.5		
0	1237.77	125	114	2.41	1237.76	1231	13	39.6		
0	1280.76	51	64	2.18	1280.77	1275	12	68.1		
0	1378.22	79	58	2.75	1378.28	1373	10	43.1		
0	1385.85	39	37	2.22	1385.92	1383	8	61.9		
0	1408.36	30	42	1.94	1408.43	1406	7	80.4		
0	1460.83*	312	32	2.84	1460.93	1456	11	13.5		K-40
0	1509.13	39	45	2.21	1509.26	1506	8	66.7		
0	1618.69	16	25	1.23	1618.87	1614		11130.4		

*AG*  
*10/25/11*

0231

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	1662.25	32	19	2.89	1662.45	1657	12	70.4		
1	1693.97	14	7	2.86	1694.18	1690	13	94.9	4.31E-01	
1	1698.93	15	4	2.86	1699.14	1690	13	72.7		
0	1730.86	63	21	2.85	1731.09	1726	13	40.9		
0	1764.57*	287	23	2.60	1764.81	1760	12	13.7		BI-214
0	1848.56	41	14	3.05	1848.85	1844	13	50.1		
0	1912.41	18	2	1.40	1912.73	1909	9	54.9		
0	1963.76	10	4	3.76	1964.11	1960	7	92.1		
0	1982.81	12	6	4.90	1983.17	1979	11	99.6		
0	2023.76	6	2	0.99	2024.13	2021		6125.7		
0	2118.16	24	0	2.44	2118.58	2114	9	40.8		
0	2177.12	7	0	2.22	2177.57	2175	6	75.6		
0	2203.91*	74	3	2.16	2204.38	2198	12	25.3		BI-214
0	2447.12	27	0	3.15	2447.70	2443	9	38.5		
0	2614.17	24	0	3.25	2614.83	2610	9	40.8		TL-208

Total number of lines in spectrum 49  
Number of unidentified lines 24  
Number of lines tentatively identified by NID 25 51.02%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.013E+01	2.013E+01	0.340E+01	16.89	
TL-208	1.41E+10Y	1.00	7.275E-01	7.275E-01	2.462E-01	33.84	
PB-210	22.26Y	1.00	1.028E+01	1.030E+01	0.356E+01	34.55	
PB-212	1.41E+10Y	1.00	9.664E-01	9.664E-01	2.480E-01	25.66	
BI-214	1602.00Y	1.00	1.305E+01	1.305E+01	0.113E+01	8.69	
PB-214	1602.00Y	1.00	1.275E+01	1.275E+01	0.122E+01	9.54	
RA-224	1.41E+10Y	1.00	2.976E+01	2.976E+01	0.493E+01	16.58	
RA-226	1602.00Y	1.00	2.918E+01	2.918E+01	5.370E+01	184.04	
TH-234	4.47E+09Y	1.00	1.041E+01	1.041E+01	0.503E+01	48.31	
Total Activity :			1.273E+02	1.273E+02			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RB-82	25.55D	2.10	8.935E-01	1.878E+00	2.147E+00	114.32	
AM-243	7380.00Y	1.00	3.360E+00	3.360E+00	0.446E+00	13.28	
Total Activity :			4.253E+00	5.238E+00			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	9.811E+00	1.022E+01	0.349E+01	34.13	
SN-126	1.00E+05Y	1.00	9.859E-01	9.859E-01	3.313E-01	33.60	
NP-237	2.14E+06Y	1.00	2.893E+00	2.893E+00	0.971E+00	33.56	
Total Activity :			1.369E+01	1.410E+01			

Grand Total Activity : 1.452E+02 1.466E+02

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr		2-Sigma	Status
				pCi/GRAM	pCi/GRAM	%Error	
K-40	1460.81	10.67*	1.798E-01	2.013E+01	2.013E+01	16.89	OK
Final Mean for 1 Valid Peaks = 2.013E+01+/- 3.401E+00 ( 16.89%)							
TL-208	583.14	30.22*	4.216E-01	1.316E+00	1.316E+00	49.60	OK
	860.37	4.48	2.847E-01	-----	Line Not Found	-----	Absent
	2614.66	35.85	1.318E-01	6.299E-01	6.299E-01	42.20	OK
Final Mean for 2 Valid Peaks = 7.275E-01+/- 2.462E-01 ( 33.84%)							
PB-210	46.50	4.05*	1.407E+00	1.028E+01	1.030E+01	34.55	OK
Final Mean for 1 Valid Peaks = 1.030E+01+/- 3.560E+00 ( 34.55%)							
PB-212	238.63	44.60*	1.012E+00	9.664E-01	9.664E-01	25.66	OK
	300.09	3.41	8.241E-01	-----	Line Not Found	-----	Absent
Final Mean for 1 Valid Peaks = 9.664E-01+/- 2.480E-01 ( 25.66%)							
BI-214	609.31	46.30*	4.029E-01	1.250E+01	1.250E+01	12.91	OK
	1120.29	15.10	2.230E-01	1.300E+01	1.300E+01	20.75	OK
	1764.49	15.80	1.582E-01	1.425E+01	1.425E+01	16.67	OK
	2204.22	4.98	1.404E-01	1.312E+01	1.312E+01	27.23	OK
Final Mean for 4 Valid Peaks = 1.305E+01+/- 1.134E+00 ( 8.69%)							
PB-214	295.21	19.19	8.368E-01	1.220E+01	1.220E+01	13.65	OK
	351.92	37.19*	7.067E-01	1.338E+01	1.338E+01	13.32	OK
Final Mean for 2 Valid Peaks = 1.275E+01+/- 1.217E+00 ( 9.54%)							
RA-224	240.98	3.95*	1.004E+00	2.976E+01	2.976E+01	16.58	OK
Final Mean for 1 Valid Peaks = 2.976E+01+/- 4.934E+00 ( 16.58%)							
RA-226	186.21	3.28*	1.229E+00	2.918E+01	2.918E+01	184.04	OK
Final Mean for 1 Valid Peaks = 2.918E+01+/- 5.370E+01 (184.04%)							
TH-234	63.29	3.80*	1.639E+00	1.041E+01	1.041E+01	48.31	OK
Final Mean for 1 Valid Peaks = 1.041E+01+/- 5.029E+00 ( 48.31%)							

Nuclide Type: ACTIVATION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
RB-82	776.52	13.00*	3.149E-01	8.935E-01	1.878E+00	114.32	OK

Final Mean for 1 Valid Peaks = 1.878E+00+/- 2.147E+00 (114.32%)

AM-243	74.67	66.00*	1.692E+00	3.360E+00	3.360E+00	13.28	OK
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Final Mean for 1 Valid Peaks = 3.360E+00+/- 4.463E-01 ( 13.28%)

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CD-109	88.03	3.72*	1.693E+00	9.811E+00	1.022E+01	34.13	OK

Final Mean for 1 Valid Peaks = 1.022E+01+/- 3.489E+00 ( 34.13%)

SN-126	87.57	37.00*	1.693E+00	9.859E-01	9.859E-01	33.60	OK
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Final Mean for 1 Valid Peaks = 9.859E-01+/- 3.313E-01 ( 33.60%)

NP-237	86.50	12.60*	1.695E+00	2.893E+00	2.893E+00	33.56	OK
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Final Mean for 1 Valid Peaks = 2.893E+00+/- 9.708E-01 ( 33.56%)

Flag: "\*" = Keyline

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.013E+01	3.401E+00	2.009E+00	1.889E-01	10.020
RB-82	1.878E+00	2.147E+00	3.440E+00	3.853E-01	0.546
CD-109	1.022E+01	3.489E+00	4.747E+00	5.572E-01	2.153
SN-126	9.859E-01	3.313E-01	4.579E-01	4.616E-02	2.153
TL-208	7.275E-01	2.462E-01	6.197E-01	7.102E-02	1.174
PB-210	1.030E+01	3.560E+00	4.354E+00	3.625E-01	2.366
PB-212	9.664E-01	2.480E-01	3.538E-01	3.266E-02	2.731
BI-214	1.305E+01	1.134E+00	4.159E-01	4.503E-02	31.382
PB-214	1.275E+01	1.217E+00	4.518E-01	5.274E-02	28.220
RA-224	2.976E+01	4.934E+00	4.029E+00	3.724E-01	7.385
RA-226	2.918E+01	5.370E+01	4.870E+00	8.919E+00	5.992
TH-234	1.041E+01	5.029E+00	4.437E+00	3.365E-01	2.347
NP-237	2.893E+00	9.708E-01	1.343E+00	1.337E-01	2.154
AM-243	3.360E+00	4.463E-01	2.625E-01	2.267E-02	12.797

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	9.469E-01		1.528E+00	2.589E+00	3.359E-01	0.366
NA-22	-7.395E-02		1.492E-01	2.219E-01	2.139E-02	-0.333
AL-26	-3.371E-02		7.683E-02	1.363E-01	1.163E-02	-0.247
TI-44	9.691E-03		1.573E-01	1.853E-01	1.478E-02	0.052
SC-46	-6.829E-02		1.681E-01	2.915E-01	3.836E-02	-0.234
V-48	1.025E-01		4.335E-01	7.848E-01	9.993E-02	0.131
CR-51	8.737E-01		2.032E+00	3.400E+00	3.740E-01	0.257
MN-54	-7.837E-02		1.394E-01	2.393E-01	2.922E-02	-0.327
CO-56	-1.950E-01		1.693E-01	2.776E-01	3.447E-02	-0.702
CO-57	-5.291E-02		1.068E-01	1.752E-01	1.615E-02	-0.302
CO-58	-9.486E-02		1.623E-01	2.788E-01	3.292E-02	-0.340
FE-59	-1.052E-01		3.460E-01	6.059E-01	7.250E-02	-0.174
CO-60	-1.073E-01		1.375E-01	2.305E-01	2.375E-02	-0.465
ZN-65	8.293E-01		4.035E-01	7.104E-01	7.962E-02	1.167
SE-75	-2.611E-01		2.141E-01	2.974E-01	2.788E-02	-0.878
RB-83	-1.498E-01		3.004E-01	4.822E-01	8.731E-02	-0.311
KR-85	2.211E+01		2.809E+01	4.777E+01	6.037E+00	0.463
SR-85	1.289E-01		1.638E-01	2.785E-01	3.520E-02	0.463
Y-88	5.669E-02		9.685E-02	1.994E-01	1.683E-02	0.284
NB-93M	1.961E+01		8.855E+00	6.853E+00	2.814E+00	2.862
NB-94	8.897E-03		1.344E-01	2.134E-01	2.741E-02	0.042
NB-95	1.159E+00		3.192E-01	5.520E-01	6.082E-02	2.099
NB-95M	1.549E+02		9.415E+01	1.434E+02	1.322E+01	1.080
ZR-95	-2.328E-02		3.125E-01	4.901E-01	5.668E-02	-0.047
RU-103	-9.843E-02		1.911E-01	3.070E-01	5.233E-02	-0.321
RU-106	-9.666E-01		1.163E+00	1.812E+00	2.652E-01	-0.533
AG-108M	4.069E-02		1.305E-01	2.360E-01	2.426E-02	0.172
AG-110M	-2.028E-02		1.486E-01	2.166E-01	2.031E-02	-0.094
SN-113	-5.312E-02		1.953E-01	3.188E-01	4.207E-02	-0.167

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TE123M	-7.476E-02		1.358E-01	2.217E-01	1.922E-02	-0.337
SB-124	7.085E-02		1.873E-01	2.828E-01	3.110E-02	0.251
I-125	-1.635E+00		2.374E+00	3.733E+00	3.969E-01	-0.438
SB-125	1.973E-01		4.003E-01	6.716E-01	8.887E-02	0.294
SB-126	6.854E-02		1.017E+00	1.817E+00	1.861E-01	0.038
SB-127	4.181E+00		4.131E+01	6.943E+01	6.694E+00	0.060
I-129	1.786E-01		2.300E-01	3.910E-01	5.182E-02	0.457
I-131	-8.917E-01		1.332E+00	2.137E+00	2.585E-01	-0.417
BA-133	1.306E+00		3.062E-01	4.014E-01	6.212E-02	3.254
CS-134	9.254E-01		2.057E-01	3.272E-01	3.587E-02	2.828
CS-135	1.291E+00		7.011E-01	1.085E+00	1.012E-01	1.190
CS-136	-1.745E-01		7.137E-01	1.253E+00	1.536E-01	-0.139
CS-137	4.951E-02		1.594E-01	2.403E-01	2.226E-02	0.206
LA-138	1.113E-01		1.969E-01	3.731E-01	3.425E-02	0.298
CE-139	-8.291E-03		1.373E-01	2.267E-01	1.938E-02	-0.037
BA-140	-1.451E+00		2.054E+00	3.169E+00	1.087E+00	-0.458
LA-140	7.028E-01		6.100E-01	1.216E+00	1.098E-01	0.578
CE-141	-9.035E-02		3.476E-01	5.711E-01	1.350E-01	-0.158
CE-144	-3.064E-01		8.853E-01	1.456E+00	1.318E-01	-0.210
PM-144	2.057E-02		1.269E-01	2.129E-01	2.096E-02	0.097
PM-145	-2.563E-01		5.603E-01	7.935E-01	5.183E-01	-0.323
PM-146	-4.541E-04		2.604E-01	4.313E-01	5.644E-02	-0.001
ND-147	2.069E+00		4.826E+00	8.152E+00	1.012E+00	0.254
EU-152	1.352E+00	+	1.099E+00	2.030E+00	2.307E-01	0.666
GD-153	-1.716E-01		3.962E-01	6.522E-01	6.298E-02	-0.263
EU-154	-1.989E-01		4.147E-01	6.180E-01	5.958E-02	-0.322
EU-155	1.192E+00	+	4.000E-01	5.987E-01	5.958E-02	1.991
EU-156	-5.173E+00		4.388E+00	6.946E+00	1.683E+00	-0.745
HO-166M	-1.002E-01		2.026E-01	3.515E-01	3.546E-02	-0.285
HF-172	-4.914E-02		7.868E-01	1.303E+00	1.193E-01	-0.038
LU-172	2.022E-01		3.519E+00	6.331E+00	7.283E-01	0.032
LU-173	1.116E+00		5.786E-01	8.935E-01	8.333E-02	1.250
HF-175	9.129E-02		2.159E-01	2.576E-01	2.934E-02	0.354
LU-176	-9.370E-02		1.041E-01	1.660E-01	1.692E-02	-0.565
TA-182	6.644E+00	+	1.378E+00	1.881E+00	2.091E-01	3.531
IR-192	-9.355E-02		2.981E-01	4.851E-01	6.320E-02	-0.193
HG-203	-7.968E-02		2.159E-01	3.127E-01	2.987E-02	-0.255
BI-207	7.270E-02		1.198E-01	2.040E-01	2.397E-02	0.356
BI-210M	-2.191E-01		2.454E-01	3.472E-01	3.235E-02	-0.631
PB-211	2.964E+00		4.012E+00	6.759E+00	8.839E-01	0.439
BI-212	1.158E-01		9.972E-01	1.787E+00	1.850E-01	0.065
RN-219	1.205E+00		1.735E+00	2.924E+00	3.820E-01	0.412
RA-223	-6.292E-02		2.672E+00	4.406E+00	4.735E-01	-0.014
RA-225	1.772E+00		1.244E+00	1.922E+00	1.809E-01	0.922
TH-227	2.219E+00		1.083E+00	1.656E+00	1.526E-01	1.340
AC-228	9.109E-01	+	7.592E-01	1.042E+00	1.381E-01	0.874
TH-230	1.882E-01		4.011E+01	4.715E+01	3.754E+00	0.004
PA-231	4.584E+00		4.704E+00	7.184E+00	7.229E-01	0.638

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-231	-6.211E-01		1.135E+00	1.881E+00	3.134E-01	-0.330
PA-233	1.057E-02		5.065E-01	8.379E-01	1.942E-01	0.013
PA-234	2.200E-02		4.345E-01	7.198E-01	6.538E-02	0.031
PA-234M	4.906E+00		1.422E+01	2.594E+01	3.262E+00	0.189
U-235	2.670E-01		8.848E-01	1.466E+00	2.588E-01	0.182
AM-241	1.223E-01		3.544E-01	4.856E-01	3.542E-02	0.252
CM-243	2.457E-02		7.955E-01	1.172E+00	1.093E-01	0.021



Total number of lines in spectrum 49  
Number of unidentified lines 24  
Number of lines tentatively identified by NID 25 51.02%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.013E+01	2.013E+01	0.340E+01	16.89	
TL-208	1.41E+10Y	1.00	7.275E-01	7.275E-01	2.462E-01	33.84	
PB-210	22.26Y	1.00	1.028E+01	1.030E+01	0.356E+01	34.55	
PB-212	1.41E+10Y	1.00	9.664E-01	9.664E-01	2.480E-01	25.66	
BI-214	1602.00Y	1.00	1.305E+01	1.305E+01	0.113E+01	8.69	
PB-214	1602.00Y	1.00	1.275E+01	1.275E+01	0.122E+01	9.54	
RA-224	1.41E+10Y	1.00	2.976E+01	2.976E+01	0.493E+01	16.58	
RA-226	1602.00Y	1.00	2.918E+01	2.918E+01	5.370E+01	184.04	
TH-234	4.47E+09Y	1.00	1.041E+01	1.041E+01	0.503E+01	48.31	
Total Activity :			1.273E+02	1.273E+02			

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RB-82	25.55D	2.10	8.935E-01	1.878E+00	2.147E+00	114.32	
AM-243	7380.00Y	1.00	3.360E+00	3.360E+00	0.446E+00	13.28	
Total Activity :			4.253E+00	5.238E+00			

Nuclide Type : FISSION

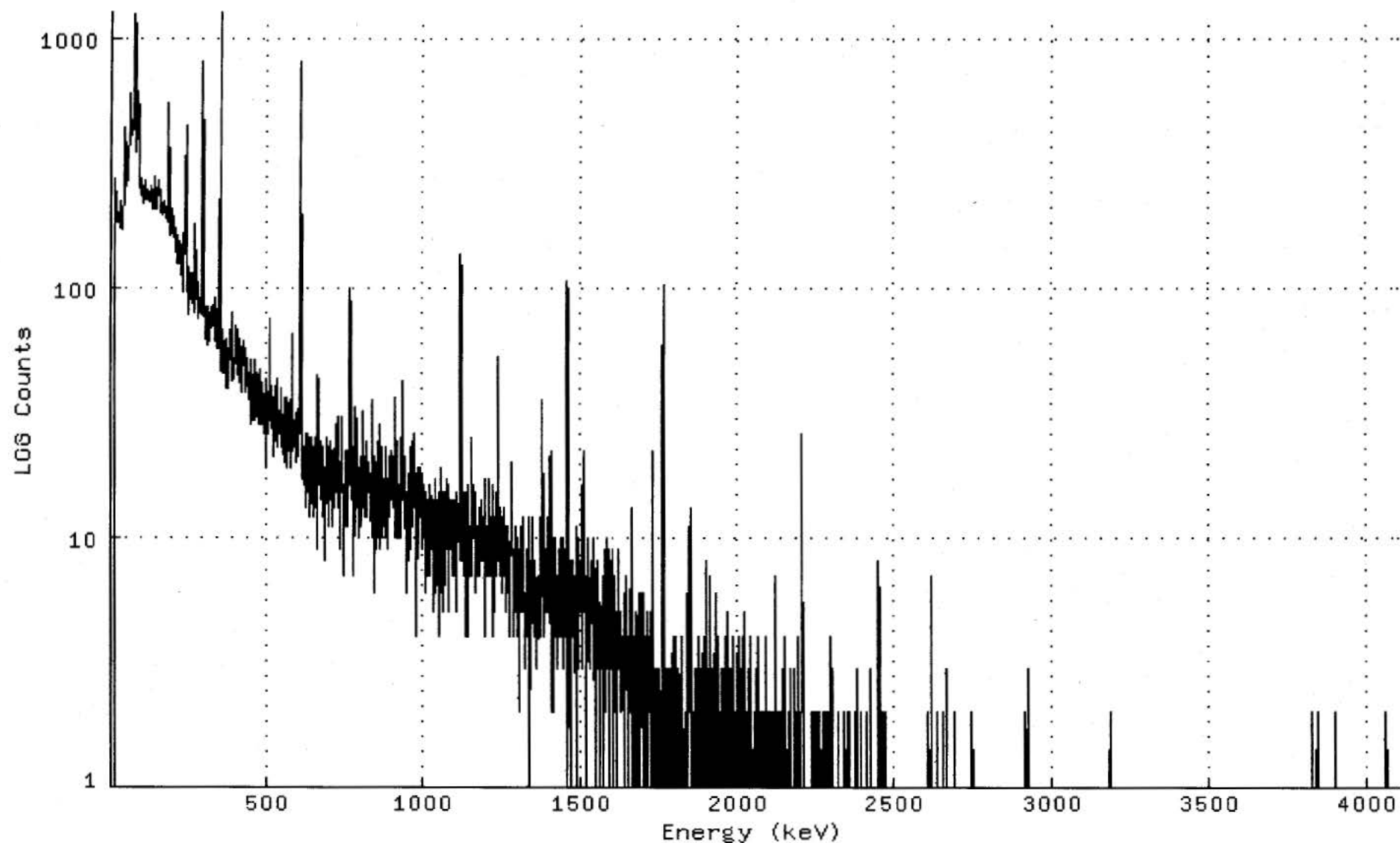
Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	9.811E+00	1.022E+01	0.349E+01	34.13	
SN-126	1.00E+05Y	1.00	9.859E-01	9.859E-01	3.313E-01	33.60	
NP-237	2.14E+06Y	1.00	2.893E+00	2.893E+00	0.971E+00	33.56	
Total Activity :			1.369E+01	1.410E+01			

Grand Total Activity : 1.452E+02 1.466E+02

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916711\_GE4\_GAS1102\_169786.CNF;1  
Title :  
Sample Title: JB-68-31-110928  
Start Time: 25-OCT-2011 08:52 Sample Time: 28-SEP-2011 00:00 Energy Offset: 6.14527E-01  
Real Time : 0 01:00:04.00 Sample ID : 1109167-11 Energy Slope : 9.99512E-01  
Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00



## Channel

1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	1	4	208	271
17:	213	212	200	181	214	181	185	194
25:	181	198	185	191	185	183	220	190
33:	172	181	169	203	205	199	198	208
41:	212	232	274	269	394	434	331	250
49:	272	333	270	348	361	265	295	314
57:	352	338	394	398	413	536	592	407
65:	402	402	428	399	412	461	422	511
73:	694	1005	1015	1215	1052	485	408	387
81:	371	347	430	404	387	600	576	413
89:	420	397	426	530	404	304	251	237
97:	240	271	242	232	230	232	214	247
105:	235	250	233	222	231	238	247	263
113:	244	231	243	232	222	223	221	220
121:	237	219	218	234	230	221	241	242
129:	253	229	227	205	240	238	229	244
137:	217	254	206	227	227	233	274	216
145:	231	213	204	249	226	266	255	236
153:	238	267	240	219	244	217	226	215
161:	196	209	214	207	214	193	194	219
169:	198	203	209	212	204	209	191	197
177:	187	192	186	194	182	188	202	293
185:	538	500	256	183	201	161	159	172
193:	163	186	181	163	178	203	182	181
201:	163	171	166	159	149	150	138	155
209:	169	171	149	135	150	158	149	124
217:	137	123	139	131	140	151	142	137
225:	133	111	148	112	163	119	144	95
233:	127	130	137	154	219	270	219	250
241:	437	414	153	109	112	98	91	92
249:	77	120	98	119	105	89	114	105
257:	114	109	101	114	85	90	89	88
265:	88	92	79	110	128	178	109	102
273:	105	111	103	91	89	90	74	104
281:	87	86	94	82	87	90	78	84
289:	84	92	77	105	211	646	796	269
297:	86	76	101	87	90	77	70	79
305:	66	80	64	58	68	82	80	68
313:	67	65	61	69	73	71	75	82
321:	80	68	71	79	76	74	70	84
329:	71	77	77	71	78	61	81	76
337:	91	73	69	62	56	62	64	69
345:	57	62	59	56	118	431	1267	989
353:	275	84	46	45	53	55	67	62
361:	49	61	51	57	58	45	52	54
369:	55	62	60	59	39	60	39	56
377:	56	52	55	47	54	51	56	54
385:	53	58	79	65	50	55	63	42
393:	49	52	50	51	47	43	58	49
401:	69	68	52	65	61	60	67	44
409:	65	56	62	52	46	52	41	54
417:	38	48	52	54	53	55	61	56
425:	48	58	51	50	55	56	56	41

433:	48	38	47	47	40	52	41	47
441:	35	41	37	39	37	40	51	30
449:	34	33	28	42	40	38	36	33
457:	39	44	29	29	50	51	36	48
465:	31	30	45	41	36	44	36	28
473:	38	38	44	31	33	46	40	47
481:	40	45	28	39	30	39	41	28
489:	36	37	32	27	26	26	37	21
497:	23	19	43	36	30	30	36	31
505:	38	26	31	29	59	62	74	41
513:	29	40	30	31	27	32	30	30
521:	36	21	27	29	28	35	40	27
529:	35	24	30	32	43	26	28	31
537:	23	29	26	30	27	28	32	32
545:	39	23	33	29	29	33	29	28
553:	27	23	30	22	20	24	27	36
561:	29	20	34	19	25	26	36	28
569:	28	34	31	26	26	22	30	28
577:	19	20	32	35	36	65	65	30
585:	29	22	25	25	25	25	23	29
593:	29	28	22	21	31	20	26	24
601:	27	21	27	31	34	26	126	531
609:	791	440	86	26	17	23	24	20
617:	22	17	23	20	17	17	15	13
625:	16	19	26	18	15	15	16	19
633:	26	19	25	23	18	12	22	18
641:	12	15	19	17	25	20	14	23
649:	14	12	23	16	21	15	25	14
657:	25	21	19	9	26	18	20	37
665:	44	41	18	23	16	16	18	14
673:	17	24	17	23	21	12	22	16
681:	22	23	15	14	15	19	8	16
689:	12	15	15	17	24	25	20	14
697:	13	20	23	11	18	22	23	24
705:	19	22	16	12	16	22	16	11
713:	16	19	20	13	17	20	18	28
721:	15	18	25	15	26	14	30	20
729:	13	18	21	19	16	17	9	18
737:	17	19	21	17	16	30	15	19
745:	13	16	16	11	7	12	22	21
753:	20	14	11	14	22	14	20	17
761:	21	11	23	16	24	32	51	98
769:	78	25	19	19	14	16	23	12
777:	16	14	17	7	14	19	21	18
785:	33	33	27	17	13	16	20	13
793:	19	11	16	13	10	15	11	15
801:	16	21	16	14	24	24	32	14
809:	13	15	12	15	13	20	16	21
817:	17	12	16	24	18	12	17	17
825:	20	17	15	18	20	13	18	17
833:	17	14	13	10	15	35	25	22
841:	23	16	21	17	15	18	6	13
849:	16	18	20	18	12	24	10	10
857:	12	11	14	21	22	9	15	14
865:	28	19	10	13	13	16	10	14
873:	12	17	11	13	14	15	21	10
881:	21	23	22	9	15	17	11	10
889:	13	21	18	18	16	12	14	22
897:	14	18	17	16	17	15	21	20
905:	19	13	18	19	18	36	31	26

913:	23	10	20	12	17	10	24	14
921:	10	16	14	13	13	13	16	19
929:	20	10	17	18	35	42	35	23
937:	14	19	12	18	12	21	14	16
945:	7	14	15	10	6	14	14	16
953:	12	8	18	12	23	14	9	9
961:	16	10	24	18	16	22	11	22
969:	26	18	15	16	13	14	17	5
977:	12	18	10	4	16	11	11	13
985:	19	16	14	12	15	13	14	19
993:	12	9	16	12	18	11	15	12
1001:	10	16	13	11	10	15	13	6
1009:	9	15	6	14	11	11	7	12
1017:	8	16	10	15	12	7	15	14
1025:	14	12	13	14	9	14	7	12
1033:	5	10	9	9	6	11	11	17
1041:	12	11	7	14	11	12	10	4
1049:	15	14	12	14	15	10	19	6
1057:	9	10	7	11	15	15	7	8
1065:	5	8	14	15	15	13	12	10
1073:	14	17	12	14	13	6	11	14
1081:	16	5	8	14	9	12	12	14
1089:	10	9	8	10	11	8	14	7
1097:	14	9	7	7	8	11	12	12
1105:	5	12	15	8	11	12	13	13
1113:	12	11	17	8	12	25	91	134
1121:	112	43	12	18	8	15	8	11
1129:	7	15	11	14	15	11	10	9
1137:	4	13	16	4	9	10	10	10
1145:	11	8	11	8	7	8	12	7
1153:	14	20	25	19	12	16	11	10
1161:	14	11	13	9	6	9	13	15
1169:	8	7	10	10	10	7	7	8
1177:	8	11	8	13	12	9	12	8
1185:	8	8	14	8	8	12	10	9
1193:	9	11	8	4	17	16	9	9
1201:	7	10	11	8	7	17	11	8
1209:	16	9	7	9	8	7	10	8
1217:	12	12	8	4	7	16	12	8
1225:	12	9	5	12	10	8	7	11
1233:	15	11	12	15	40	53	32	20
1241:	8	8	7	13	10	8	7	8
1249:	9	9	12	10	6	12	11	11
1257:	13	13	7	7	10	9	8	5
1265:	11	6	10	7	10	9	11	7
1273:	7	4	4	8	5	7	13	20
1281:	13	11	13	10	7	4	9	4
1289:	6	6	10	5	11	6	8	5
1297:	10	6	4	6	5	8	6	8
1305:	5	2	6	9	8	9	11	10
1313:	7	5	12	9	6	8	8	5
1321:	6	3	3	6	6	5	5	9
1329:	9	8	6	4	8	12	6	8
1337:	7	1	6	8	7	8	4	4
1345:	5	7	12	7	6	8	4	5
1353:	6	4	5	8	6	3	6	5
1361:	3	3	5	4	7	5	7	5
1369:	6	8	6	12	4	7	6	19
1377:	25	35	22	7	8	4	4	9
1385:	18	16	7	9	8	5	5	9

1393:	7	5	10	6	12	5	5	11
1401:	21	21	13	8	10	2	22	21
1409:	11	9	5	2	10	3	2	5
1417:	4	4	8	6	6	6	10	5
1425:	7	7	7	3	5	4	9	7
1433:	5	8	8	6	6	10	4	9
1441:	7	3	6	6	5	10	5	6
1449:	4	4	8	9	7	4	7	1
1457:	4	9	31	105	94	64	24	7
1465:	4	3	1	3	3	5	8	7
1473:	5	7	5	6	8	4	7	7
1481:	4	7	4	4	2	11	6	6
1489:	1	6	3	4	8	10	7	5
1497:	5	7	6	6	8	5	10	8
1505:	7	3	11	12	22	18	8	5
1513:	5	7	6	6	7	7	3	1
1521:	10	4	9	10	4	8	6	3
1529:	5	6	3	4	5	5	5	6
1537:	8	5	8	9	3	3	10	7
1545:	1	4	7	3	7	3	7	8
1553:	6	5	3	4	6	5	1	3
1561:	3	2	5	3	3	4	4	4
1569:	4	7	5	0	5	5	2	5
1577:	2	9	7	2	8	7	4	10
1585:	3	10	4	3	9	1	1	7
1593:	5	3	7	8	7	7	6	9
1601:	5	1	3	4	5	3	7	2
1609:	3	4	5	4	1	3	5	1
1617:	3	3	9	4	4	3	3	3
1625:	2	3	4	5	3	4	4	4
1633:	3	3	4	1	4	5	6	4
1641:	1	4	6	7	4	3	3	3
1649:	2	1	3	3	4	4	3	4
1657:	3	2	5	3	13	9	9	3
1665:	1	2	1	0	1	4	2	2
1673:	1	3	5	2	2	2	0	1
1681:	2	2	2	4	6	1	1	4
1689:	1	1	3	2	4	6	5	3
1697:	2	4	6	6	1	0	1	3
1705:	4	2	4	2	2	3	2	1
1713:	5	2	4	4	2	3	2	3
1721:	4	1	3	2	5	2	1	6
1729:	17	22	17	5	3	3	2	3
1737:	2	1	0	1	1	1	3	2
1745:	0	1	3	0	2	2	1	2
1753:	1	1	0	2	2	3	4	1
1761:	4	2	37	93	102	49	19	1
1769:	1	3	0	3	3	2	1	3
1777:	1	2	0	1	1	1	0	2
1785:	0	2	3	1	2	0	2	1
1793:	3	4	2	3	1	2	4	2
1801:	1	4	1	1	3	3	0	1
1809:	0	2	0	2	0	1	2	2
1817:	2	4	1	4	3	3	2	3
1825:	1	0	0	1	1	0	1	1
1833:	2	1	1	1	1	2	6	1
1841:	1	2	2	2	4	5	11	6
1849:	13	1	4	1	3	2	2	1
1857:	0	0	0	2	1	3	0	0
1865:	1	2	3	1	3	1	2	2

1873:	2	4	2	2	4	0	2	2
1881:	0	2	0	3	0	0	2	1
1889:	1	3	4	3	1	2	1	3
1897:	0	8	3	3	3	1	2	2
1905:	3	2	1	0	1	2	1	7
1913:	3	3	2	1	0	0	3	1
1921:	2	1	1	1	3	1	2	6
1929:	1	3	2	3	1	4	3	0
1937:	2	1	1	2	0	1	0	1
1945:	1	3	2	2	0	1	3	1
1953:	2	1	0	3	1	1	1	0
1961:	0	4	3	1	5	0	1	1
1969:	1	2	2	3	1	2	1	3
1977:	1	0	0	3	1	2	3	4
1985:	1	1	1	2	0	2	1	0
1993:	0	2	0	1	2	2	3	4
2001:	2	1	4	0	2	1	3	0
2009:	0	2	3	0	1	4	0	1
2017:	0	1	2	2	0	1	5	0
2025:	2	0	0	1	0	2	0	0
2033:	1	0	3	0	4	1	1	1
2041:	1	2	0	1	1	1	0	0
2049:	2	0	0	2	1	0	3	2
2057:	1	1	2	1	0	0	1	4
2065:	1	0	0	2	0	0	1	0
2073:	0	2	1	0	0	2	0	2
2081:	1	0	2	0	1	1	1	4
2089:	0	0	0	2	0	1	0	1
2097:	0	1	1	0	0	2	1	1
2105:	2	2	1	0	0	1	1	0
2113:	0	0	2	1	3	3	7	6
2121:	2	0	0	0	2	1	2	1
2129:	1	0	2	1	0	0	0	2
2137:	0	1	0	3	1	0	0	0
2145:	0	1	4	0	1	1	1	0
2153:	1	1	1	1	1	2	0	0
2161:	1	0	1	0	0	3	0	0
2169:	0	0	0	1	1	0	0	1
2177:	2	3	1	0	0	1	1	1
2185:	2	0	1	0	4	3	0	1
2193:	0	2	1	0	0	0	1	2
2201:	2	4	8	20	26	6	5	3
2209:	1	0	2	1	0	0	0	0
2217:	1	0	1	1	0	1	0	0
2225:	0	1	0	0	0	1	0	1
2233:	0	0	1	2	0	2	2	1
2241:	0	0	2	0	0	1	2	0
2249:	0	1	0	2	0	1	0	1
2257:	0	0	0	2	0	0	0	1
2265:	0	0	0	1	2	0	0	1
2273:	0	1	1	0	2	1	1	0
2281:	0	0	0	2	0	2	0	0
2289:	1	0	1	4	3	1	1	3
2297:	1	0	1	3	1	1	1	0
2305:	1	0	1	0	0	0	1	1
2313:	1	0	0	0	0	0	0	2
2321:	1	0	0	1	0	0	0	0
2329:	0	1	1	0	0	1	0	0
2337:	1	0	2	0	0	0	0	0
2345:	1	0	0	0	1	1	2	0

2353:	0	2	2	0	0	1	1	0
2361:	0	1	0	0	0	0	1	0
2369:	1	1	1	2	1	1	0	0
2377:	0	2	0	0	3	0	0	1
2385:	1	1	0	1	0	0	0	2
2393:	1	1	0	0	0	1	1	0
2401:	0	1	0	0	0	0	1	1
2409:	0	1	2	1	0	0	1	1
2417:	0	0	1	0	3	0	2	1
2425:	0	0	0	1	0	1	1	1
2433:	0	0	0	0	1	1	0	0
2441:	1	0	0	1	1	3	6	8
2449:	5	3	0	0	0	1	0	1
2457:	0	2	0	0	0	0	1	0
2465:	0	1	2	1	1	1	0	2
2473:	0	0	0	1	1	0	0	1
2481:	0	0	0	0	0	0	0	0
2489:	0	0	0	1	1	0	0	1
2497:	0	1	0	1	1	1	1	0
2505:	0	0	0	0	0	1	1	0
2513:	1	0	0	0	0	0	0	0
2521:	0	0	0	1	0	0	1	0
2529:	0	1	0	0	0	1	0	0
2537:	0	0	0	0	0	0	0	0
2545:	0	0	1	0	0	0	1	1
2553:	0	0	0	1	1	1	0	0
2561:	0	0	1	0	0	0	0	0
2569:	0	0	0	0	0	0	0	0
2577:	0	0	0	0	0	0	1	0
2585:	0	0	0	0	0	1	1	1
2593:	0	0	0	0	0	0	0	0
2601:	0	0	0	0	2	0	0	1
2609:	0	0	1	0	2	6	7	6
2617:	2	0	0	0	0	0	1	0
2625:	0	0	0	0	0	1	0	0
2633:	1	1	2	0	0	0	1	1
2641:	0	0	0	0	0	0	0	0
2649:	1	0	0	0	0	2	0	0
2657:	0	0	0	0	0	1	0	0
2665:	0	3	0	1	0	0	0	0
2673:	0	0	0	0	0	0	0	0
2681:	0	0	0	0	0	0	0	0
2689:	1	2	1	1	1	1	0	1
2697:	0	0	0	0	0	0	1	0
2705:	1	0	0	0	0	0	0	1
2713:	0	0	0	0	0	0	1	0
2721:	0	0	0	0	0	0	0	1
2729:	0	0	0	0	0	0	1	0
2737:	0	0	0	0	0	0	0	0
2745:	0	2	0	0	0	0	0	0
2753:	0	1	0	0	0	0	0	0
2761:	0	0	0	0	1	0	0	0
2769:	0	0	0	0	0	0	0	0
2777:	0	0	1	0	0	0	0	0
2785:	0	0	0	0	0	0	0	0
2793:	0	1	1	0	0	0	0	0
2801:	0	0	1	1	1	0	0	0
2809:	0	0	0	0	1	0	0	0
2817:	0	0	0	1	0	1	1	0
2825:	0	0	0	0	0	0	0	1



2833:	1	1	0	0	1	0	1	0
2841:	0	0	0	0	0	0	0	0
2849:	0	0	0	0	0	0	0	1
2857:	0	0	0	0	0	0	1	0
2865:	0	0	0	0	0	1	0	0
2873:	1	0	0	0	0	0	0	0
2881:	0	0	0	0	0	0	0	0
2889:	1	1	1	0	0	0	0	0
2897:	0	0	0	1	0	0	0	0
2905:	0	1	0	0	0	1	0	0
2913:	0	1	2	0	0	1	0	0
2921:	0	0	3	0	0	0	0	0
2929:	0	0	0	0	0	0	0	1
2937:	0	0	0	0	0	0	0	0
2945:	0	1	0	1	0	0	1	1
2953:	0	0	0	0	0	0	0	0
2961:	0	0	0	0	0	0	0	0
2969:	0	0	1	0	0	0	0	1
2977:	0	1	0	0	0	0	0	0
2985:	0	0	0	0	0	0	1	1
2993:	0	0	0	0	0	0	1	0
3001:	0	0	1	0	0	0	0	0
3009:	0	0	0	0	0	0	0	0
3017:	0	0	0	0	0	1	0	0
3025:	0	0	0	0	0	0	0	0
3033:	0	0	0	0	0	0	0	0
3041:	0	0	0	0	0	0	0	0
3049:	0	1	0	0	1	1	0	0
3057:	0	0	0	0	1	0	0	1
3065:	0	0	0	0	0	0	0	0
3073:	0	0	0	0	0	1	0	0
3081:	1	0	0	0	0	0	0	0
3089:	0	0	0	0	0	0	0	0
3097:	0	0	0	0	1	0	0	0
3105:	0	0	0	0	0	0	0	0
3113:	0	1	0	0	0	0	0	0
3121:	0	1	0	0	1	0	1	1
3129:	1	0	0	0	0	0	1	0
3137:	0	0	0	0	0	0	0	0
3145:	1	0	0	0	0	1	0	0
3153:	0	0	0	0	1	0	0	0
3161:	0	0	0	0	0	0	0	0
3169:	1	0	0	0	0	0	0	0
3177:	0	0	0	0	1	0	2	0
3185:	0	0	0	1	0	0	1	0
3193:	0	0	0	0	1	0	0	0
3201:	0	0	0	0	0	0	0	1
3209:	0	0	0	0	0	0	1	0
3217:	0	0	0	0	0	0	0	0
3225:	0	0	0	0	0	0	0	0
3233:	0	0	0	0	0	0	0	1
3241:	0	0	0	0	0	0	0	0
3249:	0	0	0	0	0	0	0	0
3257:	0	0	0	0	0	1	0	0
3265:	0	0	0	0	0	1	0	0
3273:	0	0	0	0	0	0	0	0
3281:	0	0	0	0	0	0	0	0
3289:	0	0	0	0	0	0	0	0
3297:	1	0	1	0	0	0	0	0
3305:	0	0	1	0	0	0	0	0

3313:	0	0	1	0	0	0	0	0
3321:	0	0	0	1	0	0	0	0
3329:	0	0	0	0	0	0	1	0
3337:	0	0	0	1	0	0	0	0
3345:	0	0	0	0	1	0	0	0
3353:	0	0	0	1	0	0	0	1
3361:	1	0	0	0	1	0	0	0
3369:	0	0	0	0	0	0	1	0
3377:	0	0	1	0	0	0	0	0
3385:	0	0	0	0	0	0	0	0
3393:	0	0	0	0	0	0	0	0
3401:	1	0	0	0	0	0	0	0
3409:	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	1	0
3425:	0	0	0	0	0	0	0	0
3433:	0	0	0	0	0	0	0	0
3441:	0	0	0	1	0	0	0	0
3449:	0	0	0	0	1	0	0	0
3457:	0	0	0	0	0	1	0	1
3465:	0	0	0	1	0	0	0	0
3473:	0	0	0	0	0	0	0	0
3481:	0	0	1	0	0	0	1	0
3489:	0	0	0	1	0	0	0	0
3497:	0	0	0	0	0	1	0	0
3505:	0	1	1	0	0	0	0	0
3513:	0	0	1	0	0	0	0	0
3521:	0	0	1	0	0	0	0	1
3529:	0	0	0	0	0	0	0	0
3537:	0	0	1	0	0	0	0	0
3545:	0	0	0	0	0	0	0	0
3553:	0	0	0	0	0	0	0	0
3561:	1	0	0	0	0	0	0	1
3569:	1	0	0	1	0	0	0	0
3577:	0	0	0	0	0	0	0	0
3585:	0	0	0	0	0	1	0	0
3593:	1	0	0	0	0	0	0	0
3601:	0	0	0	0	0	1	1	0
3609:	0	0	0	0	0	0	0	0
3617:	0	0	0	0	0	0	0	0
3625:	0	0	0	0	0	0	0	0
3633:	0	0	0	0	0	0	0	0
3641:	0	0	0	0	0	0	0	0
3649:	0	1	0	0	0	0	0	0
3657:	0	1	1	0	0	0	0	1
3665:	0	0	0	0	0	0	0	0
3673:	0	0	0	0	0	0	1	0
3681:	0	0	0	1	0	0	0	0
3689:	1	0	0	0	0	0	0	0
3697:	0	0	0	0	0	0	1	1
3705:	0	0	0	0	0	0	0	0
3713:	0	0	0	0	0	0	0	0
3721:	0	0	0	0	0	0	0	0
3729:	0	0	0	0	0	0	0	0
3737:	0	0	0	0	0	0	0	0
3745:	0	0	0	0	0	0	0	1
3753:	0	0	0	0	0	0	0	0
3761:	0	0	0	0	0	0	0	0
3769:	1	0	0	0	0	0	0	0
3777:	0	0	1	0	0	0	0	0
3785:	1	1	0	0	0	0	0	0

3793:	0	1	0	0	0	0	0	0
3801:	0	0	0	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	2	0	1
3825:	0	0	0	0	0	0	0	0
3833:	0	0	0	0	0	0	2	0
3841:	0	0	0	0	0	0	0	0
3849:	0	0	0	0	0	0	1	0
3857:	0	0	0	0	0	0	0	0
3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	1	0	1	0	0
3881:	1	0	0	0	0	0	0	0
3889:	0	0	0	0	0	1	0	0
3897:	2	0	0	0	0	0	0	0
3905:	0	0	0	0	0	0	0	0
3913:	0	1	0	0	0	0	0	0
3921:	1	0	0	1	0	0	1	0
3929:	0	0	0	0	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0
3953:	0	0	0	0	0	0	1	0
3961:	1	0	0	0	0	0	0	0
3969:	0	0	0	1	0	0	0	0
3977:	0	0	0	0	0	0	0	0
3985:	0	0	0	0	0	0	0	0
3993:	0	1	0	0	0	0	1	0
4001:	0	0	0	0	0	0	1	0
4009:	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	0	0	0	0
4033:	0	0	0	0	0	0	0	0
4041:	0	0	0	0	0	0	0	0
4049:	0	1	0	0	0	0	0	2
4057:	0	0	0	0	0	0	0	0
4065:	1	0	0	0	0	0	0	0
4073:	0	0	0	0	0	1	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0

Sample ID : 1109167-12

Page : 1  
Acquisition date : 25-OCT-2011 09:02:09

VAX/VMS Peak Search Report Generated 25-OCT-2011 10:03:19.29

10/25/11

Configuration : DKA100: [GAMMA.SCUSR.ARCHIVE] SMP\_110916712\_GE3\_GAS1102\_169787.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : JBBKGD-E-31-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 09:02:09  
 Sample ID : 1109167-12 Sample Quantity : 6.15800E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE3 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:28.11 0.8%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	46.64*	106	530	1.26	46.92	44	7	76.0		PB-210
0	76.21*	968	1071	3.93	76.49	72	10	14.3		
1	89.45	121	431	1.52	89.74	82	15	59.0	1.58E+01	CD-109
1	92.77*	179	378	1.53	93.06	82	15	40.1		
0	185.86*	177	363	1.90	186.15	183	7	39.6		RA-226
0	209.32	71	441	1.76	209.61	205	10	113.0		
0	222.03	55	326	1.90	222.32	218	8	117.6		
1	238.56*	563	182	1.59	238.86	234	12	10.9	2.88E+01	PB-212
1	241.85*	178	175	1.59	242.14	234	12	29.4		RA-224
0	270.01*	40	134	1.47	270.31	268	5	93.8		
0	295.18*	302	185	1.82	295.47	293	7	19.0		PB-214
0	328.66	55	148	1.48	328.95	326	7	78.5		
2	336.02	28	126	1.85	336.32	334	9	151.6	1.30E+01	
2	338.69*	99	138	1.86	338.98	334	9	43.2		AC-228
0	351.87*	557	133	1.84	352.17	347	9	11.5		PB-214
0	388.42	45	123	2.97	388.72	386	8	89.8		
0	410.88	38	105	2.94	411.18	408	8	99.3		
0	456.00	34	74	3.64	456.31	452	8	95.3		
0	463.81	71	77	4.21	464.12	460	9	50.6		
0	487.89	28	58	2.43	488.20	485	6	98.0		
2	578.80	12	20	1.88	579.11	578	12	96.5	2.27E+00	
2	583.47*	141	67	1.84	583.79	578	12	25.3		TL-208
0	609.39*	365	66	1.62	609.71	605	10	13.6		BI-214
0	663.71	39	72	1.67	664.03	659	9	84.7		
0	727.28	28	42	1.48	727.61	724	7	85.6		BI-212
0	756.46	21	47	1.64	756.78	753	8	119.6		
0	769.54	53	56	1.63	769.86	766	9	57.3		
2	781.86	15	19	2.02	782.18	779	12	119.4	1.97E+00	
2	785.29	25	25	2.22	785.61	779	12	84.0		
0	800.10	57	90	4.24	800.42	791	21	86.5		
0	840.13	28	34	3.80	840.46	837	8	85.1		
0	848.00	17	31	2.42	848.33	845	8	124.9		
0	860.20	29	46	1.93	860.53	855	9	92.2		TL-208
0	911.54*	108	50	1.63	911.88	907	8	30.3		AC-228
0	969.40	33	42	2.00	969.74	967	6	72.7		AC-228
0	983.78	20	23	1.97	984.12	981	7	92.8		

AG  
10/25/11

0250

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	1037.77	24	33	4.28	1038.12	1034	9	95.0		
0	1120.55	72	35	1.35	1120.90	1118	7	35.6		BI-214
0	1155.72	31	39	5.56	1156.07	1151	12	87.1		
5	1224.39	24	32	3.31	1224.75	1221	14	94.7	1.85E+00	
5	1229.65	14	27	2.06	1230.00	1221	14	124.1		
0	1240.44*	36	69	2.24	1240.79	1235	13	101.5		
0	1377.79*	21	17	1.60	1378.15	1375	8	81.4		
0	1435.42	11	7	2.01	1435.79	1431	9	103.4		
0	1461.21*	495	26	2.27	1461.57	1456	13	10.1		K-40
0	1510.17	9	8	1.25	1510.54	1507	7	132.4		
0	1590.15	18	5	5.23	1590.53	1586	10	66.2		
0	1621.34	8	6	2.87	1621.72	1617	8	122.6		BI-212
0	1730.40	15	4	1.84	1730.78	1726	11	79.0		
0	1764.97*	75	5	2.83	1765.36	1760	10	26.3		BI-214
0	2008.19	9	2	1.10	2008.59	2003	9	92.3		
0	2103.26	15	0	3.06	2103.67	2099	9	51.6		
0	2118.18	8	5	1.53	2118.58	2114	9	113.7		
0	2205.21	16	7	2.27	2205.63	2201	9	76.6		BI-214
0	2216.59	8	0	2.96	2217.00	2214	6	70.7		
0	2417.78	5	0	2.75	2418.20	2415	6	89.4		
0	2615.44*	52	4	2.26	2615.88	2612	8	31.9		TL-208

Total number of lines in spectrum 57  
Number of unidentified lines 23  
Number of lines tentatively identified by NID 34 59.65%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.492E+01	1.492E+01	0.210E+01	14.07	
TL-208	1.41E+10Y	1.00	6.549E-01	6.549E-01	1.374E-01	20.98	
PB-210	22.26Y	1.00	1.831E+00	1.835E+00	1.409E+00	76.74	
BI-212	1.41E+10Y	1.00	4.902E-01	4.902E-01	3.644E-01	74.34	
PB-212	1.41E+10Y	1.00	8.826E-01	8.826E-01	1.296E-01	14.69	
BI-214	1602.00Y	1.00	1.316E+00	1.316E+00	0.178E+00	13.53	
PB-214	1602.00Y	1.00	1.378E+00	1.378E+00	0.170E+00	12.34	
RA-224	1.41E+10Y	1.00	3.180E+00	3.180E+00	0.987E+00	31.06	
RA-226	1602.00Y	1.00	3.213E+00	3.213E+00	6.023E+00	187.45	
AC-228	1.41E+10Y	1.00	7.457E-01	7.457E-01	1.859E-01	24.93	
Total Activity :			2.862E+01	2.862E+01			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	1.599E+00	1.665E+00	1.021E+00	61.28	
Total Activity :			1.599E+00	1.665E+00			

Grand Total Activity : 3.021E+01 3.029E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
K-40	1460.81	10.67*	3.789E-01	1.492E+01	1.492E+01	14.07	OK
Final Mean for 1 Valid Peaks = 1.492E+01+/- 2.100E+00 ( 14.07%)							
TL-208	583.14	30.22*	8.029E-01	7.102E-01	7.102E-01	27.46	OK
	860.37	4.48	5.645E-01	1.409E+00	1.409E+00	92.63	OK
	2614.66	35.85	3.019E-01	5.821E-01	5.821E-01	33.64	OK
Final Mean for 3 Valid Peaks = 6.549E-01+/- 1.374E-01 ( 20.98%)							
PB-210	46.50	4.05*	1.750E+00	1.831E+00	1.835E+00	76.74	OK
Final Mean for 1 Valid Peaks = 1.835E+00+/- 1.409E+00 ( 76.74%)							
BI-212	727.17	11.80*	6.552E-01	4.415E-01	4.415E-01	86.16	OK
	1620.62	2.75	3.568E-01	1.034E+00	1.034E+00	122.94	OK
Final Mean for 2 Valid Peaks = 4.902E-01+/- 3.644E-01 ( 74.34%)							
PB-212	238.63	44.60*	1.744E+00	8.826E-01	8.826E-01	14.69	OK
	300.09	3.41	1.461E+00	-----	Line Not Found	-----	Absent
Final Mean for 1 Valid Peaks = 8.826E-01+/- 1.296E-01 ( 14.69%)							
BI-214	609.31	46.30*	7.707E-01	1.249E+00	1.249E+00	17.22	OK
	1120.29	15.10	4.552E-01	1.281E+00	1.281E+00	37.12	OK
	1764.49	15.80	3.416E-01	1.692E+00	1.692E+00	28.04	OK
	2204.22	4.98	3.132E-01	1.261E+00	1.261E+00	77.32	OK
Final Mean for 4 Valid Peaks = 1.316E+00+/- 1.781E-01 ( 13.53%)							
PB-214	295.21	19.19	1.480E+00	1.294E+00	1.294E+00	21.09	OK
	351.92	37.19*	1.276E+00	1.432E+00	1.432E+00	15.19	OK
Final Mean for 2 Valid Peaks = 1.378E+00+/- 1.701E-01 ( 12.34%)							
RA-224	240.98	3.95*	1.732E+00	3.180E+00	3.180E+00	31.06	OK
Final Mean for 1 Valid Peaks = 3.180E+00+/- 9.875E-01 ( 31.06%)							
RA-226	186.21	3.28*	2.048E+00	3.213E+00	3.213E+00	187.45	OK
Final Mean for 1 Valid Peaks = 3.213E+00+/- 6.023E+00 (187.45%)							
AC-228	338.32	11.40	1.320E+00	8.054E-01	8.054E-01	44.27	OK
	911.07	27.70*	5.376E-01	8.811E-01	8.811E-01	31.65	OK
	969.11	16.60	5.106E-01	4.764E-01	4.764E-01	73.27	OK
Final Mean for 3 Valid Peaks = 7.457E-01+/- 1.859E-01 ( 24.93%)							

Nuclide Line Activity Report (continued)  
Sample ID : 1109167-12

Page : 5  
Acquisition date : 25-OCT-2011 09:02:09

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CD-109	88.03	3.72*	2.473E+00	1.599E+00	1.665E+00	61.28	OK

Final Mean for 1 Valid Peaks = 1.665E+00+/- 1.021E+00 ( 61.28%)

Flag: "\*" = Keyline



---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	1.492E+01	2.100E+00	4.935E-01	4.426E-02	30.239
CD-109	1.665E+00	1.021E+00	1.207E+00	1.946E-01	1.380
TL-208	6.549E-01	1.374E-01	1.867E-01	1.849E-02	3.507
PB-210	1.835E+00	1.409E+00	1.314E+00	1.323E-01	1.397
BI-212	4.902E-01	3.644E-01	5.046E-01	4.665E-02	0.972
PB-212	8.826E-01	1.296E-01	9.772E-02	8.850E-03	9.032
BI-214	1.316E+00	1.781E-01	1.106E-01	1.082E-02	11.898
PB-214	1.378E+00	1.701E-01	1.131E-01	1.023E-02	12.189
RA-224	3.180E+00	9.875E-01	1.112E+00	1.002E-01	2.859
RA-226	3.213E+00	6.023E+00	1.337E+00	2.450E+00	2.403
AC-228	7.457E-01	1.859E-01	2.741E-01	2.226E-02	2.720

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.900E-01		4.328E-01	7.480E-01	7.441E-02	0.254
NA-22	2.642E-03		4.319E-02	7.909E-02	7.248E-03	0.033
AL-26	-2.474E-03		2.190E-02	4.304E-02	3.851E-03	-0.057
TI-44	-3.297E-02		3.675E-02	5.667E-02	5.755E-03	-0.582
SC-46	-5.758E-02		4.679E-02	7.327E-02	5.938E-03	-0.786
V-48	1.548E-01	+	1.444E-01	2.469E-01	2.151E-02	0.627
CR-51	1.166E-01		5.231E-01	8.938E-01	8.144E-02	0.131
MN-54	-2.933E-03		4.379E-02	7.118E-02	6.128E-03	-0.041
CO-56	4.514E-02	+	5.652E-02	8.212E-02	6.987E-03	0.550
CO-57	-2.357E-03		2.770E-02	4.732E-02	5.496E-03	-0.050
CO-58	-1.123E-02		4.985E-02	7.971E-02	7.025E-03	-0.141
FE-59	5.325E-02		1.157E-01	2.200E-01	2.254E-02	0.242
CO-60	-8.774E-03		5.297E-02	9.257E-02	9.408E-03	-0.095
ZN-65	-4.197E-02		1.083E-01	1.643E-01	1.601E-02	-0.255
SE-75	7.272E-03		5.588E-02	8.753E-02	7.486E-03	0.083
RB-82	-9.957E-02		7.252E-01	9.605E-01	8.658E-02	-0.104
RB-83	5.547E-02		7.035E-02	1.378E-01	2.266E-02	0.403
KR-85	-1.261E+01		8.765E+00	1.422E+01	1.424E+00	-0.886
SR-85	-7.351E-02		5.111E-02	8.294E-02	8.307E-03	-0.886
Y-88	7.442E-03		3.281E-02	6.735E-02	6.022E-03	0.110
NB-93M	-4.096E-01		2.659E+00	4.683E+00	3.463E+00	-0.087
NB-94	-8.087E-04		3.532E-02	6.468E-02	5.360E-03	-0.013
NB-95	1.073E-01		7.576E-02	1.348E-01	1.223E-02	0.796
NB-95M	2.971E+01		2.147E+01	3.824E+01	3.484E+00	0.777
ZR-95	1.005E-01	+	1.207E-01	1.704E-01	1.695E-02	0.590
RU-103	-4.784E-03		5.641E-02	9.323E-02	1.402E-02	-0.051
RU-106	6.737E-02		3.319E-01	6.213E-01	8.749E-02	0.108
AG-108M	-4.451E-03		4.272E-02	6.944E-02	6.431E-03	-0.064
AG-110M	-1.766E-02		3.655E-02	5.706E-02	5.380E-03	-0.309
SN-113	-3.436E-03		5.998E-02	9.152E-02	8.886E-03	-0.038
TE123M	-3.620E-04		3.383E-02	5.745E-02	5.859E-03	-0.006
SB-124	-4.128E-02		4.786E-02	7.108E-02	6.977E-03	-0.581

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-125	-5.142E-01		8.213E-01	1.412E+00	1.979E-01	-0.364
SB-125	-3.634E-02		1.077E-01	1.740E-01	1.718E-02	-0.209
SB-126	1.793E-01		3.278E-01	5.738E-01	5.319E-02	0.312
SN-126	2.587E-01		9.101E-02	1.458E-01	2.170E-02	1.775
SB-127	6.999E+00		1.154E+01	2.256E+01	2.112E+00	0.310
I-129	-2.157E-02		8.775E-02	1.544E-01	2.872E-02	-0.140
I-131	-1.109E-01		3.446E-01	5.632E-01	5.173E-02	-0.197
BA-133	-6.081E-03		4.899E-02	7.479E-02	1.011E-02	-0.081
CS-134	-2.222E-02		3.587E-02	5.514E-02	5.417E-03	-0.403
CS-135	4.852E-02		1.790E-01	2.832E-01	2.379E-02	0.171
CS-136	-9.868E-02		2.051E-01	3.337E-01	3.157E-02	-0.296
CS-137	5.811E-02		4.261E-02	8.479E-02	7.979E-03	0.685
LA-138	5.373E-02	+	5.581E-02	1.002E-01	8.710E-03	0.536
CE-139	-2.517E-02		3.579E-02	5.861E-02	5.821E-03	-0.430
BA-140	1.765E-01		5.161E-01	9.698E-01	3.252E-01	0.182
LA-140	-4.157E-02		1.664E-01	2.604E-01	2.313E-02	-0.160
CE-141	4.024E-02		9.586E-02	1.640E-01	3.999E-02	0.245
CE-144	-1.035E-02		2.299E-01	3.918E-01	4.372E-02	-0.026
PM-144	9.968E-03		3.489E-02	6.568E-02	6.139E-03	0.152
PM-145	-1.263E-01		1.909E-01	2.949E-01	1.942E-01	-0.428
PM-146	4.078E-02		7.770E-02	1.268E-01	1.250E-02	0.322
ND-147	4.633E-01		1.256E+00	2.376E+00	2.380E-01	0.195
EU-152	3.688E-02		2.792E-01	5.183E-01	5.665E-02	0.071
GD-153	-8.895E-02		1.157E-01	1.916E-01	2.554E-02	-0.464
EU-154	1.034E-02		1.203E-01	2.209E-01	2.025E-02	0.047
EU-155	3.172E-01		1.102E-01	1.770E-01	2.586E-02	1.792
EU-156	-7.779E-01		1.331E+00	1.992E+00	4.563E-01	-0.390
HO-166M	8.930E-04		6.417E-02	1.176E-01	1.093E-02	0.008
HF-172	-1.215E-01		2.061E-01	3.429E-01	3.929E-02	-0.354
LU-172	6.100E-01		1.150E+00	2.204E+00	2.110E-01	0.277
LU-173	4.849E-02		1.471E-01	2.329E-01	1.933E-02	0.208
HF-175	9.560E-03		5.226E-02	7.230E-02	6.466E-03	0.132
LU-176	-2.012E-03		2.808E-02	4.695E-02	3.982E-03	-0.043
TA-182	6.549E-01	+	2.431E-01	4.595E-01	4.494E-02	1.425
IR-192	4.657E-02		8.330E-02	1.365E-01	1.354E-02	0.341
HG-203	9.760E-03		5.219E-02	8.865E-02	7.417E-03	0.110
BI-207	1.806E-02		3.106E-02	5.959E-02	5.929E-03	0.303
BI-210M	7.715E-03		5.944E-02	1.006E-01	8.614E-03	0.077
PB-211	-7.865E-02		1.139E+00	1.734E+00	1.660E-01	-0.045
RN-219	1.292E-01		4.690E-01	7.982E-01	7.620E-02	0.162
RA-223	-4.374E-01		7.315E-01	1.068E+00	9.297E-02	-0.409
RA-225	2.990E-01		4.419E-01	7.465E-01	8.905E-02	0.400
TH-227	4.124E-01		2.476E-01	4.440E-01	4.042E-02	0.929
TH-230	-8.472E+00		9.377E+00	1.446E+01	1.461E+00	-0.586
PA-231	-2.422E-01		1.317E+00	2.004E+00	1.689E-01	-0.121
TH-231	-1.014E-01		4.728E-01	8.339E-01	2.065E-01	-0.122
PA-233	-5.828E-02		1.321E-01	2.141E-01	4.801E-02	-0.272
PA-234	-4.001E-02		1.146E-01	1.928E-01	2.168E-02	-0.208

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234M	-1.295E+00		5.137E+00	9.004E+00	7.969E-01	-0.144
TH-234	4.670E-01		8.737E-01	1.549E+00	1.409E-01	0.302
U-235	1.816E-01		2.407E-01	4.156E-01	7.757E-02	0.437
NP-237	7.694E-01		2.674E-01	4.295E-01	6.276E-02	1.792
AM-241	-1.175E-01		8.883E-02	1.464E-01	1.206E-02	-0.803
AM-243	3.841E-01		7.574E-02	1.122E-01	1.316E-02	3.423
CM-243	6.164E-03		1.954E-01	3.286E-01	2.678E-02	0.019

Total number of lines in spectrum 57  
Number of unidentified lines 23  
Number of lines tentatively identified by NID 34 59.65%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.492E+01	1.492E+01	0.210E+01	14.07	
TL-208	1.41E+10Y	1.00	6.549E-01	6.549E-01	1.374E-01	20.98	
PB-210	22.26Y	1.00	1.831E+00	1.835E+00	1.409E+00	76.74	
BI-212	1.41E+10Y	1.00	4.902E-01	4.902E-01	3.644E-01	74.34	
PB-212	1.41E+10Y	1.00	8.826E-01	8.826E-01	1.296E-01	14.69	
BI-214	1602.00Y	1.00	1.316E+00	1.316E+00	0.178E+00	13.53	
PB-214	1602.00Y	1.00	1.378E+00	1.378E+00	0.170E+00	12.34	
RA-224	1.41E+10Y	1.00	3.180E+00	3.180E+00	0.987E+00	31.06	
RA-226	1602.00Y	1.00	3.213E+00	3.213E+00	6.023E+00	187.45	
AC-228	1.41E+10Y	1.00	7.457E-01	7.457E-01	1.859E-01	24.93	
Total Activity :			2.862E+01	2.862E+01			

Nuclide Type : FISSION

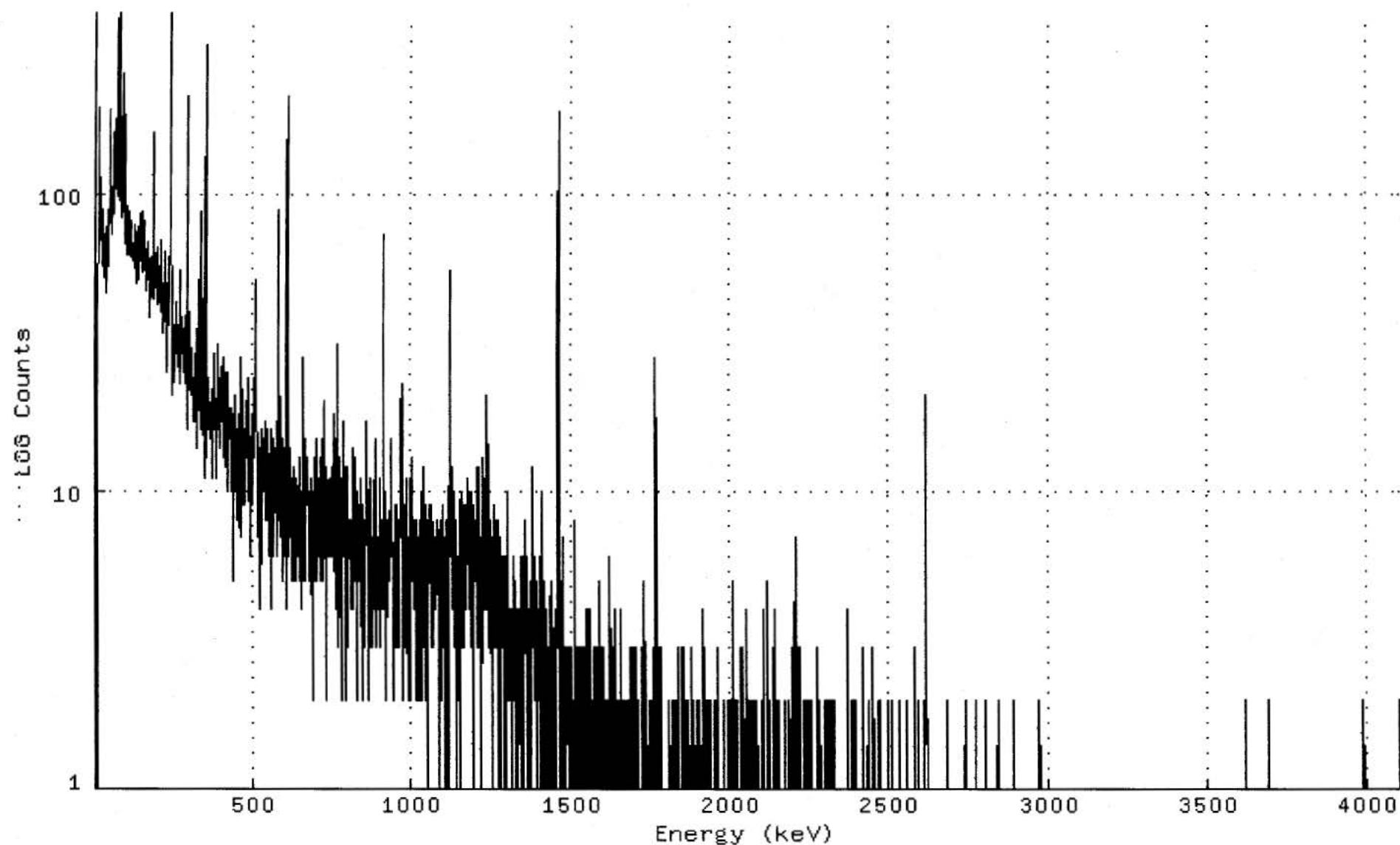
Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	1.599E+00	1.665E+00	1.021E+00	61.28	
Total Activity :			1.599E+00	1.665E+00			

Grand Total Activity : 3.021E+01 3.029E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916712\_GE3\_GAS1102\_169787.CNF;1  
Title :  
Sample Title: JBBKGD-E-31-110928  
Start Time: 25-OCT-2011 09:02 Sample Time: 28-SEP-2011 00:00 Energy Offset: -2.78447E-01  
Real Time : 0 01:00:28.11 Sample ID : 1109167-12 Energy Slope : 9.99940E-01  
Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00



## Channel

1:	0	0	0	0	0	0	0	0
9:	18	183	194	129	130	112	116	111
17:	100	79	70	91	77	69	88	67
25:	60	77	60	53	63	52	59	73
33:	58	52	69	46	65	63	71	85
41:	78	57	70	63	74	105	192	92
49:	81	83	83	74	73	105	85	92
57:	82	100	85	98	126	113	144	176
65:	113	103	126	132	118	105	124	98
73:	135	154	386	221	401	365	95	112
81:	118	90	88	118	123	83	180	178
89:	87	161	119	109	252	132	114	68
97:	70	77	84	83	90	62	64	81
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113:	71	68	61	81	72	64	66	60
121:	67	59	62	60	61	61	56	69
129:	78	71	50	70	67	67	60	51
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153:	70	80	57	57	55	66	64	53
161:	56	62	63	65	47	65	57	51
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329:	35	30	25	24	21	16	30	36
337:	21	52	86	23	33	26	26	19
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353:	228	24	13	21	15	24	17	21
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393:	16	20	17	24	15	14	19	17
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465:	16	22	15	9	10	18	10	9
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537:	11	17	8	8	11	11	9	16
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553:	12	7	11	16	4	7	11	15
561:	14	11	6	10	13	15	12	14
569:	13	10	9	14	10	7	6	7
577:	13	7	17	9	8	15	57	88
585:	29	15	9	11	7	17	11	10
593:	9	6	9	5	15	10	14	11
601:	12	10	6	7	4	9	14	26
609:	108	212	52	11	6	7	8	7
617:	9	12	11	10	14	6	11	9
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633:	12	9	9	5	5	10	11	10
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649:	13	8	9	10	9	4	4	5
657:	4	8	8	5	8	28	21	7
665:	15	14	5	11	11	10	9	9
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705:	9	10	8	8	10	6	11	6
713:	11	11	5	13	7	7	15	8
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737:	8	8	8	6	8	6	10	11
745:	8	11	9	12	11	6	8	6
753:	8	6	6	18	13	6	7	4
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769:	31	3	12	12	13	5	10	9
777:	7	2	4	7	7	11	5	13
785:	10	17	6	8	6	6	2	5
793:	12	11	11	12	7	3	3	5
801:	5	7	7	8	8	8	7	6
809:	7	8	5	4	6	6	4	5
817:	14	8	7	9	10	5	7	9
825:	13	7	10	2	7	4	9	9
833:	8	5	6	9	5	11	10	11
841:	11	5	6	2	3	5	9	9
849:	6	7	6	3	7	8	6	7
857:	7	9	7	14	17	6	2	5
865:	5	6	6	7	7	7	11	3
873:	4	3	5	6	6	4	5	10
881:	6	8	4	8	8	15	4	5
889:	5	3	6	4	6	7	5	4
897:	7	4	3	11	5	4	6	6
905:	8	4	8	6	4	8	41	73

913:	18	4	9	9	10	5	10	10
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929:	8	8	8	7	5	15	12	6
937:	8	7	9	5	4	3	2	5
945:	6	6	6	9	3	7	8	5
953:	6	5	9	3	7	6	3	3
961:	4	7	8	7	17	12	9	15
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977:	3	9	6	3	4	4	8	11
985:	6	5	4	2	3	7	3	6
993:	7	4	8	11	8	2	8	5
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1033:	7	2	10	4	12	8	8	3
1041:	6	4	2	2	9	2	4	3
1049:	4	8	1	5	8	8	9	8
1057:	8	5	8	3	9	7	9	9
1065:	9	7	3	6	7	4	6	5
1073:	7	4	5	4	4	5	6	5
1081:	7	7	8	7	6	7	6	2
1089:	0	6	2	4	8	7	7	5
1097:	9	7	9	4	3	5	1	1
1105:	4	5	7	1	3	6	7	8
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1121:	55	12	6	6	7	8	6	12
1129:	8	5	4	10	7	3	7	5
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1145:	5	4	5	4	2	6	1	9
1153:	4	8	9	10	8	3	5	5
1161:	5	3	3	9	3	8	7	8
1169:	5	5	5	9	4	8	6	10
1177:	6	11	7	7	6	5	7	4
1185:	10	3	8	10	7	4	6	7
1193:	3	2	7	1	9	7	6	5
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1209:	4	9	3	9	6	12	6	4
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1225:	9	13	4	4	6	11	6	5
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1241:	4	3	8	10	6	8	3	8
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1265:	8	5	4	3	5	2	1	8
1273:	4	7	3	3	1	4	4	5
1281:	7	3	5	3	4	6	5	6
1289:	1	3	4	2	2	2	6	4
1297:	1	3	5	2	10	3	4	7
1305:	3	2	4	2	3	3	2	4
1313:	3	1	4	3	2	5	4	2
1321:	3	6	4	2	3	1	5	3
1329:	3	3	1	4	2	4	0	2
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1345:	4	6	1	6	6	0	3	3
1353:	0	8	5	5	4	3	5	6
1361:	0	5	3	3	0	0	1	4
1369:	4	4	4	4	2	1	1	5
1377:	4	12	7	7	3	3	3	2
1385:	4	4	2	6	4	2	2	5



1393:	0	2	2	4	4	2	2	2
1401:	2	2	6	3	0	1	2	7
1409:	10	1	1	1	5	1	2	5
1417:	1	2	2	2	4	1	2	0
1425:	3	3	1	1	2	1	0	2
1433:	2	2	2	4	5	1	0	2
1441:	1	3	3	3	1	2	1	3
1449:	4	0	2	2	1	3	3	5
1457:	6	3	9	56	188	186	54	10
1465:	1	3	4	1	0	0	1	5
1473:	1	4	3	7	1	2	3	3
1481:	1	3	3	3	3	2	2	3
1489:	3	2	0	0	3	0	2	2
1497:	1	3	1	2	0	2	1	1
1505:	2	2	1	2	2	8	3	0
1513:	1	1	1	2	2	0	0	3
1521:	3	3	0	2	3	1	2	3
1529:	1	0	3	3	0	2	2	1
1537:	3	0	0	3	0	0	3	2
1545:	3	2	0	4	1	0	1	0
1553:	4	1	1	2	1	4	3	2
1561:	1	2	1	0	1	1	2	2
1569:	0	2	3	0	2	2	0	1
1577:	3	0	2	2	1	2	2	3
1585:	1	0	1	3	5	4	2	3
1593:	3	1	1	0	2	2	3	0
1601:	3	2	2	1	1	0	0	2
1609:	1	1	0	1	1	2	1	0
1617:	0	1	0	4	1	6	2	0
1625:	3	1	1	1	2	1	3	3
1633:	1	1	2	3	1	2	4	1
1641:	1	1	2	2	1	1	0	0
1649:	2	0	0	1	0	4	2	0
1657:	0	3	0	0	0	1	1	2
1665:	1	0	1	2	1	0	0	2
1673:	1	0	0	0	2	0	1	1
1681:	2	1	3	1	1	1	0	0
1689:	2	0	0	3	1	1	3	2
1697:	1	1	0	0	3	1	0	1
1705:	1	0	1	2	0	0	1	0
1713:	1	1	0	1	1	1	1	1
1721:	0	1	2	3	1	1	1	2
1729:	3	5	2	2	1	1	1	0
1737:	0	0	0	0	1	1	2	0
1745:	0	1	2	1	0	0	1	2
1753:	0	0	3	0	2	1	1	1
1761:	2	1	4	15	20	28	11	1
1769:	0	0	1	1	3	0	1	1
1777:	1	0	0	3	1	3	1	1
1785:	0	1	0	0	0	1	0	0
1793:	1	0	0	1	0	0	0	1
1801:	0	1	0	2	0	1	0	1
1809:	0	1	1	0	0	0	2	0
1817:	0	2	0	2	1	2	1	2
1825:	2	0	0	2	1	1	2	1
1833:	2	3	0	0	2	1	0	1
1841:	0	0	1	0	1	0	2	3
1849:	2	3	2	3	2	0	1	1
1857:	2	0	1	0	1	1	2	0
1865:	1	0	2	0	0	0	0	1

1873:	1	1	2	0	2	3	1	1
1881:	0	1	0	1	1	2	1	1
1889:	1	0	1	1	0	0	2	0
1897:	2	1	2	0	2	1	0	2
1905:	1	0	0	0	1	0	0	1
1913:	0	4	0	0	1	2	0	3
1921:	1	0	1	2	1	0	1	0
1929:	2	1	1	0	1	0	0	0
1937:	2	1	1	1	1	0	1	0
1945:	1	0	1	0	2	1	1	2
1953:	0	1	0	1	2	1	0	0
1961:	3	3	0	1	0	0	0	0
1969:	0	1	1	0	0	0	0	0
1977:	0	0	1	1	2	1	0	0
1985:	0	0	0	1	1	0	0	2
1993:	0	1	2	1	2	0	0	0
2001:	2	0	1	0	0	2	2	0
2009:	5	1	0	0	0	0	0	2
2017:	1	1	0	1	1	0	2	1
2025:	0	0	0	1	1	0	0	0
2033:	0	0	3	0	1	1	0	0
2041:	0	3	1	0	0	1	0	1
2049:	0	2	1	1	1	4	0	1
2057:	1	1	0	2	1	1	0	1
2065:	1	2	0	2	0	0	1	0
2073:	0	0	1	0	1	2	0	2
2081:	1	1	0	2	0	0	0	1
2089:	0	1	0	0	1	0	1	0
2097:	1	0	0	1	1	0	4	4
2105:	4	1	0	0	0	1	0	0
2113:	0	0	0	1	2	5	2	1
2121:	2	0	2	0	1	1	1	1
2129:	0	0	1	0	1	1	0	3
2137:	0	2	0	0	2	1	1	4
2145:	0	0	2	0	1	1	1	2
2153:	0	1	0	1	1	0	0	1
2161:	1	1	0	0	0	0	0	0
2169:	1	2	1	0	0	1	0	0
2177:	0	0	0	0	0	1	0	1
2185:	2	1	1	0	1	0	1	1
2193:	3	1	1	1	0	3	0	0
2201:	1	0	2	3	6	7	2	2
2209:	0	2	1	1	0	0	0	3
2217:	2	3	0	0	0	0	1	0
2225:	1	0	0	0	1	1	2	0
2233:	0	0	2	1	2	1	0	1
2241:	2	0	0	1	1	1	0	1
2249:	1	1	2	0	0	0	1	0
2257:	2	0	1	0	1	1	1	0
2265:	1	0	0	0	0	1	1	1
2273:	3	1	1	2	0	0	0	0
2281:	1	2	0	0	0	0	0	0
2289:	0	0	0	1	1	0	1	2
2297:	1	1	0	2	0	0	1	0
2305:	2	0	0	0	1	2	0	0
2313:	1	2	0	1	0	1	2	1
2321:	0	1	0	1	2	2	0	1
2329:	0	1	1	0	0	0	0	1
2337:	0	0	0	1	0	1	0	1
2345:	0	0	0	0	1	1	0	1

2353:	1	1	0	1	0	0	0	1
2361:	1	1	0	1	0	1	0	4
2369:	0	1	0	1	0	0	0	1
2377:	0	1	0	0	2	2	2	0
2385:	2	0	0	0	0	0	0	0
2393:	0	0	2	1	1	0	0	1
2401:	0	0	1	1	0	1	1	1
2409:	0	0	0	1	0	0	0	0
2417:	2	0	3	0	0	0	0	1
2425:	0	1	1	1	1	0	1	0
2433:	2	0	2	0	1	0	0	0
2441:	0	1	0	0	0	0	0	0
2449:	1	3	1	0	0	1	0	0
2457:	1	0	0	1	0	0	0	0
2465:	1	0	2	0	1	2	0	0
2473:	0	0	1	0	1	0	1	0
2481:	1	0	1	0	0	0	1	0
2489:	0	0	0	0	0	2	0	1
2497:	0	0	1	0	1	0	0	0
2505:	1	2	0	0	0	0	0	0
2513:	0	0	0	0	1	0	0	0
2521:	0	0	0	1	0	0	1	0
2529:	0	0	2	1	2	0	0	0
2537:	1	0	0	1	0	0	0	0
2545:	0	0	1	0	0	0	0	1
2553:	0	0	1	2	1	0	0	0
2561:	0	0	0	0	0	1	1	0
2569:	0	0	0	1	0	1	1	0
2577:	1	0	3	0	0	1	0	0
2585:	0	0	0	0	0	0	2	0
2593:	0	0	0	0	1	1	0	1
2601:	0	1	0	0	0	0	1	0
2609:	0	1	2	0	2	9	11	21
2617:	13	3	0	0	1	1	0	0
2625:	0	0	0	0	0	1	0	0
2633:	0	0	0	0	0	0	0	0
2641:	0	0	0	0	0	0	0	0
2649:	0	0	0	0	1	0	0	0
2657:	0	0	0	0	0	0	0	0
2665:	0	0	0	0	0	1	0	0
2673:	0	0	0	0	0	0	1	2
2681:	0	0	0	1	1	0	0	0
2689:	0	1	0	0	0	0	0	0
2697:	0	0	1	1	1	0	0	0
2705:	0	0	0	0	0	0	1	0
2713:	0	0	1	0	1	0	0	0
2721:	0	0	0	1	0	0	0	0
2729:	0	0	0	0	0	0	1	0
2737:	0	2	0	0	0	0	0	1
2745:	0	0	1	1	1	0	0	0
2753:	0	0	0	0	0	0	0	0
2761:	0	0	0	0	0	0	0	0
2769:	2	1	0	1	0	0	1	0
2777:	0	0	1	1	0	0	1	0
2785:	0	0	0	0	0	0	0	0
2793:	0	0	0	1	0	0	2	0
2801:	0	0	0	0	0	1	0	0
2809:	0	0	0	0	0	0	0	1
2817:	0	0	1	0	0	0	1	0
2825:	0	0	1	0	0	0	0	0

2833:	0	0	0	0	0	0	0	2
2841:	0	0	1	0	0	0	0	0
2849:	1	0	0	1	0	1	0	1
2857:	0	0	0	0	0	0	0	0
2865:	0	0	0	0	0	0	0	0
2873:	0	0	0	0	1	0	1	0
2881:	0	0	0	0	0	0	0	0
2889:	1	2	0	0	0	0	0	0
2897:	0	0	0	0	0	0	0	0
2905:	0	0	0	0	0	0	1	0
2913:	0	0	0	0	0	0	0	1
2921:	0	0	0	0	0	1	1	0
2929:	0	0	0	0	0	0	0	0
2937:	0	0	0	0	0	0	0	0
2945:	0	1	0	0	1	1	0	0
2953:	1	1	0	0	0	0	0	0
2961:	0	0	0	0	0	0	0	0
2969:	0	0	2	0	0	0	0	0
2977:	0	0	0	0	0	0	0	0
2985:	0	1	0	0	0	0	0	0
2993:	1	1	0	0	1	0	0	0
3001:	0	0	0	0	0	0	0	0
3009:	0	0	1	0	0	0	0	0
3017:	0	0	0	0	0	0	0	0
3025:	0	1	0	0	0	0	1	0
3033:	0	0	0	1	0	0	0	0
3041:	0	0	1	0	0	0	0	0
3049:	0	0	0	1	0	0	0	0
3057:	1	0	0	0	0	0	0	1
3065:	1	0	0	0	0	0	0	0
3073:	0	0	0	0	0	0	0	0
3081:	0	0	0	0	0	0	1	0
3089:	0	0	1	0	0	0	0	0
3097:	0	0	1	0	0	1	0	0
3105:	0	0	0	1	1	0	0	0
3113:	0	0	0	0	0	0	1	0
3121:	0	0	0	0	1	0	0	0
3129:	0	1	0	0	0	0	0	0
3137:	0	0	0	0	0	0	1	0
3145:	0	0	0	0	0	0	0	0
3153:	0	1	0	1	0	0	0	0
3161:	1	1	0	0	0	0	0	0
3169:	0	0	0	0	0	0	0	1
3177:	0	0	0	0	0	0	0	0
3185:	0	0	0	0	0	0	0	0
3193:	0	1	0	0	0	0	0	0
3201:	1	0	0	0	0	0	0	0
3209:	0	0	0	0	0	0	0	0
3217:	0	0	0	0	0	0	0	1
3225:	0	0	0	0	0	0	0	1
3233:	1	0	0	0	0	0	0	0
3241:	0	0	0	0	0	0	0	0
3249:	0	0	0	0	0	0	0	0
3257:	0	1	0	0	0	0	0	0
3265:	0	0	0	0	0	0	1	0
3273:	0	0	0	0	0	0	0	0
3281:	0	1	0	1	0	0	0	0
3289:	1	0	0	0	0	0	0	0
3297:	0	0	0	0	0	0	0	0
3305:	0	0	0	0	1	0	0	0

3313:	0	0	0	1	0	1	1	0
3321:	0	0	0	0	0	0	0	0
3329:	1	0	0	0	0	1	0	0
3337:	0	1	0	0	0	1	0	0
3345:	0	0	0	0	0	0	0	0
3353:	0	0	0	0	0	0	1	0
3361:	0	0	0	0	0	1	0	0
3369:	0	0	0	0	0	0	0	0
3377:	0	0	1	0	0	0	0	0
3385:	0	0	0	0	1	0	0	0
3393:	0	0	0	0	0	0	0	1
3401:	0	0	0	0	0	0	1	0
3409:	0	0	0	0	0	0	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	1	0	0	0	1	0
3433:	0	0	0	0	0	0	0	0
3441:	0	0	0	0	0	0	0	0
3449:	0	0	0	0	0	0	1	1
3457:	0	0	0	0	0	0	0	0
3465:	0	0	0	0	0	0	0	0
3473:	0	0	0	0	0	1	0	0
3481:	0	0	0	0	0	0	1	0
3489:	0	0	0	0	0	0	0	0
3497:	0	0	1	0	0	0	1	0
3505:	0	0	0	0	0	0	0	0
3513:	0	0	0	0	0	0	0	0
3521:	1	0	0	0	0	0	0	1
3529:	0	0	1	0	0	0	0	0
3537:	0	0	0	0	0	0	1	0
3545:	0	0	0	1	1	0	0	0
3553:	0	0	0	0	0	0	0	1
3561:	0	0	0	0	0	1	0	0
3569:	0	0	0	0	0	0	0	0
3577:	0	0	0	0	0	0	1	0
3585:	1	0	0	0	0	0	0	0
3593:	0	0	0	0	0	0	0	0
3601:	0	0	0	0	0	0	0	0
3609:	0	0	0	0	0	1	2	0
3617:	1	0	0	0	0	0	0	0
3625:	0	0	0	0	0	1	0	0
3633:	0	1	0	0	0	0	0	0
3641:	1	0	0	0	0	0	0	0
3649:	0	0	0	0	0	1	0	0
3657:	0	0	0	0	0	0	0	0
3665:	0	0	0	0	0	0	0	1
3673:	0	0	0	0	0	0	0	0
3681:	0	0	0	0	0	0	0	2
3689:	0	0	0	0	0	0	0	0
3697:	0	0	1	1	0	0	0	0
3705:	0	1	0	0	0	0	0	1
3713:	0	0	1	0	0	0	0	0
3721:	0	0	0	1	0	1	0	1
3729:	0	0	0	1	0	0	0	0
3737:	0	0	0	0	0	0	0	0
3745:	0	0	0	0	1	1	0	0
3753:	0	0	0	0	0	0	0	0
3761:	0	0	0	0	0	0	0	0
3769:	0	1	0	0	0	0	0	0
3777:	0	0	0	0	0	1	0	0
3785:	0	1	0	0	0	0	0	0

3793:	0	0	0	0	1	0	0	0
3801:	0	0	0	0	0	0	0	0
3809:	0	0	0	0	0	1	0	0
3817:	0	0	0	0	0	0	1	0
3825:	0	0	0	0	0	0	0	0
3833:	0	0	0	1	0	0	0	0
3841:	0	1	0	0	0	0	0	0
3849:	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	0	0	0
3865:	0	1	0	0	0	0	0	0
3873:	1	1	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	1
3897:	0	0	0	0	0	1	0	1
3905:	0	0	0	0	0	0	0	0
3913:	0	0	0	0	0	0	0	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	0	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	0	1	0
3953:	0	0	0	1	0	0	1	0
3961:	0	0	0	1	0	0	0	0
3969:	0	0	0	0	0	0	0	0
3977:	0	1	0	0	1	0	0	0
3985:	2	0	0	0	0	0	0	0
3993:	0	0	0	0	0	0	1	0
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	1	0
4017:	0	0	0	0	0	1	0	0
4025:	0	0	0	0	0	0	1	1
4033:	1	0	1	1	0	0	0	0
4041:	0	0	1	0	0	0	1	0
4049:	0	0	0	0	0	0	0	0
4057:	0	0	0	0	0	1	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	2	1

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Sample ID : 1109167-13

Acquisition date : 25-OCT-2011 09:55:05

VAX/VMS Peak Search Report Generated 25-OCT-2011 10:55:22.61

Configuration : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916713\_GE1\_GAS1102\_169789.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : JBBKGD-S-31-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 09:55:05  
 Sample ID : 1109167-13 Sample Quantity : 5.43700E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE1 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.38 0.0%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	76.56*	1223	1535	2.86	76.19	71	11	13.7		
0	87.86	104	765	1.08	87.49	85	5	82.3		NP-237 SN-126 CD-109
0	93.18*	161	779	1.73	92.82	90	7	63.4		
0	99.88	62	507	3.50	99.51	98	6	117.6		
0	124.23	54	359	2.68	123.87	122	5	108.7		
0	128.84	78	497	2.73	128.49	127	7	97.5		
0	186.50*	118	604	1.24	186.15	182	8	75.9		RA-226
0	209.40	61	330	1.39	209.06	207	6	97.8		
5	238.97*	686	248	1.73	238.63	235	13	10.2	1.61E+01	PB-212
5	242.39	383	261	2.06	242.05	235	13	19.5		RA-224
0	269.95	53	294	2.15	269.62	266	8	115.9		
1	295.45*	525	159	1.54	295.13	291	18	11.5	9.92E-01	PB-214
1	300.16	56	154	1.81	299.84	291	18	73.8		PB-212
0	328.66	49	185	1.19	328.35	325	7	97.2		
0	339.09	171	266	1.74	338.78	334	10	39.0		AC-228
0	352.19*	830	271	1.52	351.88	347	10	10.2		PB-214
0	464.28	70	161	2.03	463.99	459	10	72.5		
3	511.07*	72	74	2.38	510.79	506	11	55.6	1.43E+00	
4	579.11	20	41	2.68	578.85	577	12	99.0	2.28E+00	
4	583.40*	210	66	2.11	583.14	577	12	18.8		TL-208
0	609.42*	615	138	1.63	609.16	604	9	10.7		BI-214
0	663.12	78	120	1.93	662.87	657	12	60.6		CS-137
0	728.39	51	66	1.43	728.16	725	8	62.4		BI-212
0	768.81	74	79	1.84	768.59	764	10	51.1		
0	784.29	44	89	5.87	784.07	780	11	88.8		
0	911.54	140	96	1.82	911.34	906	11	32.1		AC-228
3	930.53	14	26	2.67	930.34	928	11	110.4	6.10E+00	
3	935.19	36	31	2.01	935.00	928	11	61.0		
0	969.80*	85	69	2.05	969.61	966	9	42.2		AC-228
0	1078.92	23	49	4.72	1078.76	1075	8	111.2		
5	1120.25	182	51	2.28	1120.10	1115	12	19.7	2.24E+00	BI-214
5	1122.88	16	48	3.36	1122.73	1115	12	227.7		
0	1239.12	45	102	2.63	1238.99	1233	10	89.0		
0	1280.67	24	43	1.59	1280.55	1277	7	101.5		

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It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	1344.33	24	16	2.43	1344.23	1341	7	68.3		
0	1377.80	37	38	2.49	1377.70	1373	10	71.7		
0	1386.84	25	21	8.25	1386.75	1382	11	82.3		
0	1403.20	63	32	14.43	1403.11	1393	21	51.5		
0	1439.85	39	24	9.73	1439.77	1434	14	62.4		
6	1460.66*	870	10	2.55	1460.58	1455	14	6.8	1.21E+01	K-40
0	1508.40	11	14	2.36	1508.33	1505		7133.3		
0	1593.87	39	28	10.53	1593.82	1584	21	79.0		
0	1620.75	17	7	3.15	1620.71	1615	10	76.6		BI-212
0	1657.98	27	7	7.86	1657.94	1651	13	55.5		
0	1730.11	24	9	1.97	1730.08	1726	9	60.8		
0	1752.77	7	5	1.78	1752.75	1748		8140.0		
0	1764.55*	107	12	2.66	1764.53	1760	11	23.8		BI-214
4	1843.97	7	3	3.08	1843.97	1842	8	81.1	7.63E+00	
4	1847.18	22	1	2.29	1847.18	1842	8	44.5		
0	2103.06	9	4	1.86	2103.11	2099		8101.8		
0	2117.75	14	5	1.47	2117.81	2114	9	77.7		
0	2145.26	6	2	1.84	2145.32	2141		7115.4		
0	2164.93	6	0	2.87	2165.00	2162	6	81.6		
1	2201.93	13	0	2.45	2202.00	2199	10	51.2	1.88E+00	
1	2205.93	10	0	2.45	2206.00	2199	10	96.4		
0	2334.34	5	3	1.45	2334.44	2331		6131.6		
0	2373.93	6	1	1.89	2374.04	2372	5	96.4		
0	2381.21	7	4	3.44	2381.32	2377		8127.9		
0	2446.29	17	0	2.24	2446.41	2443	7	48.5		
0	2483.53	6	0	1.92	2483.67	2480	7	81.6		
0	2613.70*	94	2	2.81	2613.86	2610	9	22.1		TL-208



Total number of lines in spectrum 61  
Number of unidentified lines 34  
Number of lines tentatively identified by NID 27 44.26%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.240E+01	2.240E+01	0.259E+01	11.58	
TL-208	1.41E+10Y	1.00	9.643E-01	9.643E-01	1.552E-01	16.09	
BI-212	1.41E+10Y	1.00	7.873E-01	7.873E-01	4.157E-01	52.81	
PB-212	1.41E+10Y	1.00	1.068E+00	1.068E+00	0.144E+00	13.47	
BI-214	1602.00Y	1.00	2.020E+00	2.020E+00	0.225E+00	11.13	
PB-214	1602.00Y	1.00	2.083E+00	2.083E+00	0.209E+00	10.04	
RA-224	1.41E+10Y	1.00	6.738E+00	6.738E+00	1.447E+00	21.48	
RA-226	1602.00Y	1.00	2.155E+00	2.155E+00	4.272E+00	198.25	
AC-228	1.41E+10Y	1.00	1.056E+00	1.056E+00	0.234E+00	22.18	
Total Activity :			3.927E+01	3.927E+01			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	1.314E+00	1.369E+00	1.139E+00	83.24	
SN-126	1.00E+05Y	1.00	1.320E-01	1.320E-01	1.096E-01	83.03	
CS-137	30.17Y	1.00	1.363E-01	1.365E-01	0.839E-01	61.42	
NP-237	2.14E+06Y	1.00	3.874E-01	3.874E-01	3.216E-01	83.01	
Total Activity :			1.969E+00	2.025E+00			

Grand Total Activity : 4.124E+01 4.130E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected Decay Corr 2-Sigma			Status
				pCi/GRAM	pCi/GRAM	%Error	
K-40	1460.81	10.67*	5.027E-01	2.240E+01	2.240E+01	11.58	OK
Final Mean for 1 Valid Peaks = 2.240E+01+/- 2.593E+00 ( 11.58%)							
TL-208	583.14	30.22*	1.029E+00	9.322E-01	9.322E-01	21.32	OK
	860.37	4.48	7.505E-01	-----	Line Not Found	-----	Absent
	2614.66	35.85	3.563E-01	1.014E+00	1.014E+00	24.48	OK
Final Mean for 2 Valid Peaks = 9.643E-01+/- 1.552E-01 ( 16.09%)							
BI-212	727.17	11.80*	8.597E-01	6.884E-01	6.884E-01	63.20	OK
	1620.62	2.75	4.684E-01	1.829E+00	1.829E+00	77.18	OK
Final Mean for 2 Valid Peaks = 7.873E-01+/- 4.157E-01 ( 52.81%)							
PB-212	238.63	44.60*	2.000E+00	1.062E+00	1.062E+00	13.69	OK
	300.09	3.41	1.716E+00	1.319E+00	1.319E+00	74.39	OK
Final Mean for 2 Valid Peaks = 1.068E+00+/- 1.438E-01 ( 13.47%)							
BI-214	609.31	46.30*	9.927E-01	1.847E+00	1.847E+00	14.75	OK
	1120.29	15.10	6.104E-01	2.733E+00	2.733E+00	21.70	OK
	1764.49	15.80	4.432E-01	2.108E+00	2.108E+00	25.49	OK
	2204.22	4.98	3.885E-01	-----	Line Not Found	-----	Absent
Final Mean for 3 Valid Peaks = 2.020E+00+/- 2.248E-01 ( 11.13%)							
PB-214	295.21	19.19	1.736E+00	2.174E+00	2.174E+00	14.67	OK
	351.92	37.19*	1.529E+00	2.014E+00	2.014E+00	13.75	OK
Final Mean for 2 Valid Peaks = 2.083E+00+/- 2.091E-01 ( 10.04%)							
RA-224	240.98	3.95*	1.987E+00	6.738E+00	6.738E+00	21.48	OK
Final Mean for 1 Valid Peaks = 6.738E+00+/- 1.447E+00 ( 21.48%)							
RA-226	186.21	3.28*	2.308E+00	2.155E+00	2.155E+00	198.25	OK
Final Mean for 1 Valid Peaks = 2.155E+00+/- 4.272E+00 (198.25%)							
AC-228	338.32	11.40	1.575E+00	1.312E+00	1.312E+00	40.05	OK
	911.07	27.70*	7.170E-01	9.702E-01	9.702E-01	33.28	OK
	969.11	16.60	6.829E-01	1.035E+00	1.035E+00	43.12	OK
Final Mean for 3 Valid Peaks = 1.056E+00+/- 2.342E-01 ( 22.18%)							

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CD-109	88.03	3.72*	2.931E+00	1.314E+00	1.369E+00	83.24	OK
Final Mean for 1 Valid Peaks = 1.369E+00+/- 1.139E+00 ( 83.24%)							
SN-126	87.57	37.00*	2.932E+00	1.320E-01	1.320E-01	83.03	OK
Final Mean for 1 Valid Peaks = 1.320E-01+/- 1.096E-01 ( 83.03%)							
CS-137	661.65	85.12*	9.283E-01	1.363E-01	1.365E-01	61.42	OK
Final Mean for 1 Valid Peaks = 1.365E-01+/- 8.386E-02 ( 61.42%)							
NP-237	86.50	12.60*	2.935E+00	3.874E-01	3.874E-01	83.01	OK
Final Mean for 1 Valid Peaks = 3.874E-01+/- 3.216E-01 ( 83.01%)							

Flag: "\*" = Keyline

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.240E+01	2.593E+00	5.888E-01	4.992E-02	38.046
CD-109	1.369E+00	1.139E+00	1.617E+00	1.878E-01	0.846
SN-126	1.320E-01	1.096E-01	1.636E-01	1.626E-02	0.807
CS-137	1.365E-01	8.386E-02	6.578E-02	6.153E-03	2.076
TL-208	9.643E-01	1.552E-01	1.877E-01	1.736E-02	5.137
BI-212	7.873E-01	4.157E-01	5.504E-01	5.031E-02	1.430
PB-212	1.068E+00	1.438E-01	1.137E-01	9.307E-03	9.393
BI-214	2.020E+00	2.248E-01	1.397E-01	1.299E-02	14.463
PB-214	2.083E+00	2.091E-01	1.365E-01	1.129E-02	15.263
RA-224	6.738E+00	1.447E+00	1.292E+00	1.058E-01	5.215
RA-226	2.155E+00	4.272E+00	1.498E+00	2.742E+00	1.439
AC-228	1.056E+00	2.342E-01	2.448E-01	1.946E-02	4.313
NP-237	3.874E-01	3.216E-01	4.552E-01	4.467E-02	0.851

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.169E-01		4.291E-01	7.916E-01	6.980E-02	0.274
NA-22	-1.052E-02		5.801E-02	8.824E-02	7.221E-03	-0.119
AL-26	-1.283E-02		2.549E-02	4.245E-02	3.391E-03	-0.302
TI-44	-9.828E-02		4.300E-02	5.940E-02	4.654E-03	-1.654
SC-46	-4.401E-02		4.712E-02	7.612E-02	6.092E-03	-0.578
V-48	-8.829E-02		1.409E-01	2.343E-01	1.894E-02	-0.377
CR-51	2.846E-01		6.064E-01	1.016E+00	8.859E-02	0.280
MN-54	-3.231E-02		4.372E-02	7.251E-02	6.153E-03	-0.446
CO-56	-2.477E-02		5.029E-02	8.543E-02	7.166E-03	-0.290
CO-57	-7.857E-03		3.799E-02	5.723E-02	5.524E-03	-0.137
CO-58	3.180E-02		4.934E-02	9.242E-02	8.029E-03	0.344
FE-59	1.187E-01		1.288E-01	2.434E-01	2.171E-02	0.488
CO-60	-2.406E-02		4.837E-02	8.070E-02	6.598E-03	-0.298
ZN-65	1.180E-02		1.239E-01	1.951E-01	1.599E-02	0.060
SE-75	-3.413E-02		6.411E-02	9.225E-02	7.575E-03	-0.370
RB-82	2.445E-01		7.559E-01	1.023E+00	9.091E-02	0.239
RB-83	8.660E-02		8.885E-02	1.549E-01	2.458E-02	0.559
KR-85	2.042E+01		8.450E+00	1.659E+01	1.494E+00	1.231
SR-85	1.191E-01		4.929E-02	9.678E-02	8.716E-03	1.231
Y-88	1.471E-02		2.871E-02	6.105E-02	4.850E-03	0.241
NB-93M	-3.348E+00		8.856E-01	1.035E-01	2.304E-02	-32.340
NB-94	-9.770E-03		3.876E-02	6.738E-02	5.508E-03	-0.145
NB-95	1.104E-01		7.347E-02	1.333E-01	1.194E-02	0.828
NB-95M	3.500E+01		2.934E+01	4.638E+01	3.798E+00	0.755
ZR-95	2.734E-02		8.706E-02	1.594E-01	1.568E-02	0.171
RU-103	-3.752E-02		5.225E-02	8.884E-02	1.275E-02	-0.422
RU-106	-1.002E-01		3.503E-01	6.138E-01	8.482E-02	-0.163
AG-108M	-8.855E-03		4.247E-02	6.653E-02	6.092E-03	-0.133
AG-110M	1.627E-02		4.030E-02	6.787E-02	6.338E-03	0.240
SN-113	-6.506E-04		5.476E-02	9.818E-02	8.332E-03	-0.007

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TE123M	1.271E-02		4.157E-02	6.898E-02	5.711E-03	0.184
SB-124	3.751E-02		5.575E-02	9.427E-02	8.759E-03	0.398
I-125	-8.368E-02		6.513E-01	1.099E+00	9.970E-02	-0.076
SB-125	-4.074E-02		1.088E-01	1.906E-01	1.651E-02	-0.214
SB-126	1.413E-01		3.237E-01	5.446E-01	4.993E-02	0.259
SB-127	2.167E+00		1.317E+01	2.389E+01	2.218E+00	0.091
I-129	-4.892E-02		6.516E-02	1.071E-01	1.125E-02	-0.457
I-131	2.481E-02		3.512E-01	6.361E-01	5.256E-02	0.039
BA-133	1.120E-01		5.831E-02	1.022E-01	1.326E-02	1.095
CS-134	-2.636E-02		4.437E-02	6.693E-02	6.234E-03	-0.394
CS-135	2.067E-01		2.116E-01	3.358E-01	2.733E-02	0.616
CS-136	-5.208E-02		2.238E-01	3.873E-01	3.263E-02	-0.134
LA-138	5.218E-02		6.880E-02	1.229E-01	1.010E-02	0.425
CE-139	1.305E-02		4.330E-02	7.177E-02	5.737E-03	0.182
BA-140	1.688E-02		5.259E-01	9.487E-01	3.156E-01	0.018
LA-140	2.018E-01		1.749E-01	3.654E-01	2.998E-02	0.552
CE-141	5.564E-02		1.121E-01	1.852E-01	4.375E-02	0.300
CE-144	-2.609E-01		3.055E-01	4.425E-01	4.089E-02	-0.590
PM-144	1.014E-02		3.714E-02	6.773E-02	6.272E-03	0.150
PM-145	-1.635E-01		1.780E-01	2.305E-01	1.501E-01	-0.709
PM-146	6.685E-02		8.312E-02	1.494E-01	1.296E-02	0.447
ND-147	6.233E-01		1.225E+00	2.290E+00	2.079E-01	0.272
EU-152	3.505E-01		2.882E-01	5.501E-01	5.825E-02	0.637
GD-153	-1.042E-01		1.502E-01	2.215E-01	2.167E-02	-0.471
EU-154	-2.856E-02		1.611E-01	2.451E-01	2.006E-02	-0.117
EU-155	1.596E-01	+	1.325E-01	2.056E-01	2.018E-02	0.776
EU-156	-5.624E-02		1.220E+00	2.170E+00	4.961E-01	-0.026
HO-166M	9.034E-03		6.136E-02	1.114E-01	1.025E-02	0.081
HF-172	2.428E-01		3.026E-01	4.237E-01	4.031E-02	0.573
LU-172	2.018E-01		1.242E+00	2.221E+00	1.817E-01	0.091
LU-173	1.539E-01		1.679E-01	2.654E-01	2.157E-02	0.580
HF-175	1.983E-02		6.211E-02	8.340E-02	6.896E-03	0.238
LU-176	2.066E-02		3.429E-02	5.364E-02	4.402E-03	0.385
TA-182	1.397E+00	+	3.033E-01	5.536E-01	4.532E-02	2.524
IR-192	-1.753E-02		8.556E-02	1.362E-01	1.193E-02	-0.129
HG-203	-9.850E-03		6.138E-02	9.879E-02	8.257E-03	-0.100
BI-207	5.248E-03		3.174E-02	5.770E-02	5.316E-03	0.091
BI-210M	-2.489E-02		7.421E-02	1.085E-01	8.846E-03	-0.229
PB-210	1.294E+00		8.290E-01	1.455E+00	1.123E-01	0.890
PB-211	-3.248E-01		1.141E+00	2.008E+00	1.670E-01	-0.162
RN-219	3.944E-01		4.915E-01	9.125E-01	7.565E-02	0.432
RA-223	4.213E-01		8.583E-01	1.330E+00	1.097E-01	0.317
RA-225	1.808E-01		3.419E-01	5.893E-01	4.932E-02	0.307
TH-227	8.629E-01		3.528E-01	5.772E-01	4.727E-02	1.495
TH-230	-2.781E+01		1.109E+01	1.514E+01	1.183E+00	-1.837
PA-231	7.812E-01		1.378E+00	2.309E+00	1.892E-01	0.338
TH-231	-2.718E-01		3.453E-01	5.671E-01	6.931E-02	-0.479
PA-233	3.563E-02		1.617E-01	2.465E-01	5.498E-02	0.145

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	1.020E-01		1.470E-01	2.304E-01	2.149E-02	0.443
PA-234M	-1.891E+00		4.534E+00	7.839E+00	6.353E-01	-0.241
TH-234	8.075E-01		9.389E-01	1.637E+00	1.213E-01	0.493
U-235	1.038E-01		2.861E-01	4.726E-01	8.332E-02	0.220
AM-241	-1.220E-01		9.426E-02	1.500E-01	1.063E-02	-0.813
AM-243	4.178E-01		7.210E-02	1.155E-01	9.830E-03	3.617
CM-243	1.223E-01		2.373E-01	3.683E-01	2.985E-02	0.332

Total number of lines in spectrum 61  
Number of unidentified lines 34  
Number of lines tentatively identified by NID 27 44.26%

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.240E+01	2.240E+01	0.259E+01	11.58	
TL-208	1.41E+10Y	1.00	9.643E-01	9.643E-01	1.552E-01	16.09	
BI-212	1.41E+10Y	1.00	7.873E-01	7.873E-01	4.157E-01	52.81	
PB-212	1.41E+10Y	1.00	1.068E+00	1.068E+00	0.144E+00	13.47	
BI-214	1602.00Y	1.00	2.020E+00	2.020E+00	0.225E+00	11.13	
PB-214	1602.00Y	1.00	2.083E+00	2.083E+00	0.209E+00	10.04	
RA-224	1.41E+10Y	1.00	6.738E+00	6.738E+00	1.447E+00	21.48	
RA-226	1602.00Y	1.00	2.155E+00	2.155E+00	4.272E+00	198.25	
AC-228	1.41E+10Y	1.00	1.056E+00	1.056E+00	0.234E+00	22.18	
Total Activity :			3.927E+01	3.927E+01			

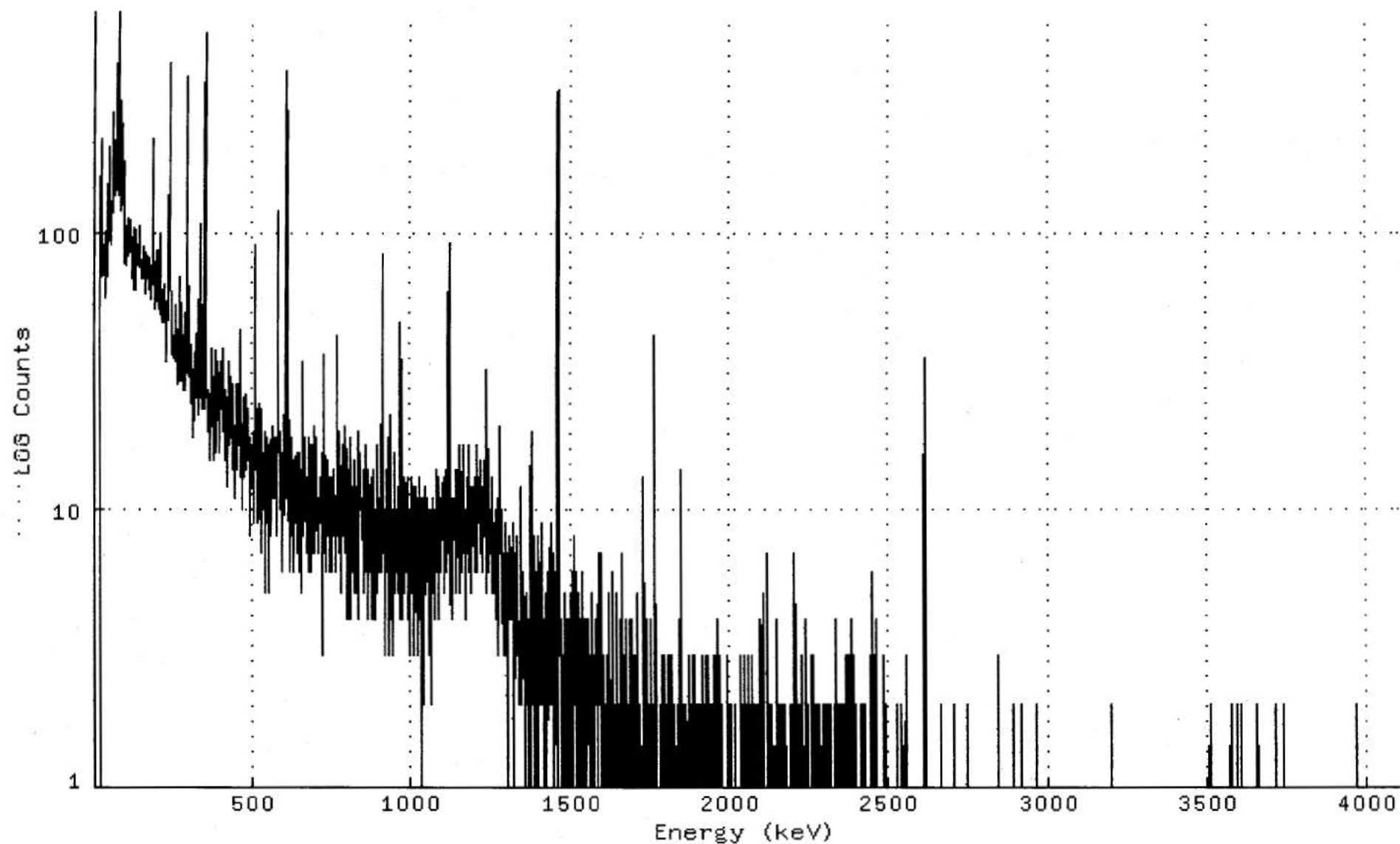
Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	1.314E+00	1.369E+00	1.139E+00	83.24	
SN-126	1.00E+05Y	1.00	1.320E-01	1.320E-01	1.096E-01	83.03	
CS-137	30.17Y	1.00	1.363E-01	1.365E-01	0.839E-01	61.42	
NP-237	2.14E+06Y	1.00	3.874E-01	3.874E-01	3.216E-01	83.01	
Total Activity :			1.969E+00	2.025E+00			

Grand Total Activity : 4.124E+01 4.130E+01

Flags: "K" = Keyline not found "M" = Manually accepted  
"E" = Manually edited "A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916713\_GE1\_GAS1102\_169789.CNF;1  
Title :  
Sample Title: JBBKGD-S-31-110928  
Start Time: 25-OCT-2011 09:55 Sample Time: 28-SEP-2011 00:00 Energy Offset: 3.84457E-01  
Real Time : 0 01:00:01.38 Sample ID : 1109167-13 Energy Slope : 9.99792E-01  
Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00





## Channel

1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	0	0	0
17:	0	1	69	145	126	200	216	133
25:	127	69	80	72	90	81	70	80
33:	77	68	79	77	78	58	100	93
41:	77	105	69	83	109	201	138	92
49:	99	111	102	101	128	123	101	90
57:	105	127	132	133	143	144	268	170
65:	138	157	136	161	134	148	142	145
73:	172	289	402	291	625	280	153	135
81:	145	125	150	184	118	147	294	178
89:	132	177	124	198	245	133	112	92
97:	77	95	103	105	99	91	76	91
105:	91	111	96	85	95	86	81	90
113:	94	84	109	94	92	85	68	83
121:	75	71	96	81	103	62	80	93
129:	97	102	63	78	62	80	76	82
137:	90	75	82	80	78	74	80	104
145:	83	78	75	72	79	74	68	76
153:	70	81	72	82	68	88	74	78
161:	66	71	66	84	60	82	75	81
169:	72	77	68	67	71	80	67	62
177:	69	65	57	59	67	76	62	65
185:	110	217	96	73	86	72	53	53
193:	69	70	68	63	56	80	86	69
201:	59	74	53	56	85	57	59	58
209:	98	73	53	50	56	52	53	47
217:	53	51	62	50	51	47	55	64
225:	52	55	34	52	56	51	54	51
233:	51	61	48	59	60	305	402	84
241:	122	232	67	56	43	43	36	44
249:	37	35	38	41	39	37	38	47
257:	54	34	54	43	40	31	44	28
265:	38	35	34	30	69	64	52	34
273:	29	45	37	29	55	44	35	29
281:	27	30	42	31	36	27	44	44
289:	51	28	38	31	37	96	364	156
297:	44	39	46	63	37	34	36	24
305:	39	33	35	27	33	18	32	25
313:	32	28	27	23	31	26	32	21
321:	36	37	28	29	32	25	33	57
329:	30	35	22	25	29	27	33	25
337:	32	107	76	39	38	37	23	28
345:	27	23	27	26	24	43	234	517
353:	146	32	32	33	25	27	27	22
361:	19	20	26	26	22	18	21	22
369:	15	27	25	38	20	20	25	24
377:	17	30	20	30	15	23	20	17
385:	16	27	37	28	28	21	34	21
393:	23	20	19	22	16	26	31	23
401:	34	34	24	27	31	29	19	26
409:	23	38	27	25	17	15	27	17
417:	22	23	24	15	12	14	19	34
425:	18	26	17	24	23	21	30	22

433:	25	18	26	15	27	20	28	14
441:	21	19	17	12	11	18	19	21
449:	14	17	28	26	19	17	28	22
457:	19	21	22	21	13	28	44	31
465:	22	19	17	14	10	16	12	25
473:	20	13	17	21	24	14	26	14
481:	15	15	16	20	22	16	23	15
489:	21	16	15	17	18	9	8	17
497:	13	14	14	14	17	16	11	19
505:	12	9	15	14	29	54	89	40
513:	17	23	14	12	9	14	18	17
521:	13	19	24	16	12	7	14	23
529:	12	13	13	11	15	10	10	16
537:	12	14	19	5	13	11	18	11
545:	18	15	13	9	12	17	12	5
553:	8	10	12	15	16	8	13	12
561:	17	19	20	15	14	11	11	13
569:	12	18	13	14	13	9	15	12
577:	8	18	14	18	20	46	119	59
585:	20	15	19	10	14	13	16	16
593:	11	12	14	11	6	15	16	18
601:	22	20	17	11	19	15	12	98
609:	376	196	22	17	17	10	10	8
617:	11	20	6	21	10	10	11	11
625:	8	18	13	13	10	9	14	6
633:	15	9	11	9	14	9	15	16
641:	7	7	13	8	11	8	11	6
649:	12	13	16	8	5	14	10	11
657:	9	8	13	17	34	24	16	17
665:	18	14	18	10	10	8	7	9
673:	12	12	13	6	18	12	11	8
681:	11	8	14	11	6	11	17	7
689:	11	10	13	10	17	10	10	20
697:	10	13	7	10	10	13	18	9
705:	11	8	9	11	10	7	10	12
713:	13	9	10	10	10	15	10	3
721:	16	12	10	8	8	7	36	22
729:	16	15	7	6	11	8	11	11
737:	11	8	9	9	15	7	13	6
745:	10	9	9	6	6	12	8	13
753:	13	9	8	14	10	12	12	6
761:	10	8	10	7	9	14	9	42
769:	31	15	8	10	8	7	10	8
777:	19	7	5	9	14	11	13	16
785:	17	15	10	9	8	11	7	14
793:	11	8	20	14	4	10	12	8
801:	16	7	14	8	13	4	8	18
809:	17	8	4	8	12	7	12	8
817:	6	11	11	7	15	5	9	10
825:	8	10	7	5	11	12	8	13
833:	4	8	19	7	8	15	16	15
841:	14	14	12	8	11	9	8	9
849:	10	6	11	9	14	5	6	13
857:	8	10	6	15	17	10	4	13
865:	6	8	14	11	9	11	8	9
873:	7	5	13	11	6	4	7	4
881:	10	7	8	4	14	4	5	5
889:	10	5	8	10	9	17	7	8
897:	5	7	11	11	7	8	10	8
905:	8	9	7	6	11	38	83	46

913:	7	9	12	8	10	10	3	5
921:	3	14	11	7	6	11	8	6
929:	8	10	13	3	18	18	22	5
937:	6	5	4	8	8	3	10	4
945:	10	7	8	5	16	9	16	6
953:	10	7	10	7	6	8	5	12
961:	8	6	7	17	15	4	12	31
969:	47	25	9	10	13	4	9	9
977:	13	7	10	5	7	6	12	6
985:	6	11	12	13	5	12	10	8
993:	4	10	10	3	7	9	10	6
1001:	9	5	6	13	9	9	11	12
1009:	8	3	3	6	12	8	8	8
1017:	6	6	3	11	7	9	10	12
1025:	4	13	13	9	6	6	1	7
1033:	7	6	11	10	4	10	11	6
1041:	2	12	9	6	8	7	7	7
1049:	6	7	11	8	10	3	10	10
1057:	7	7	5	6	9	6	10	2
1065:	4	7	5	10	11	8	8	8
1073:	5	6	4	10	8	11	11	14
1081:	8	6	8	13	10	6	4	9
1089:	5	10	9	8	11	7	6	10
1097:	9	9	9	12	12	13	5	8
1105:	7	9	12	12	10	12	6	14
1113:	12	13	7	9	12	10	40	91
1121:	51	20	7	13	5	4	6	7
1129:	9	11	6	10	10	11	10	8
1137:	10	9	9	14	5	8	10	12
1145:	11	10	12	14	9	5	10	11
1153:	8	7	17	11	6	8	8	12
1161:	11	7	10	7	17	9	9	7
1169:	4	10	6	4	7	7	7	12
1177:	13	9	11	7	17	9	6	8
1185:	9	9	5	12	5	11	6	9
1193:	9	10	9	10	12	9	13	8
1201:	8	6	8	6	14	17	16	13
1209:	11	9	11	9	12	9	13	10
1217:	7	11	12	15	10	9	6	10
1225:	11	8	12	11	10	15	8	9
1233:	13	5	7	13	28	32	23	12
1241:	6	8	11	6	7	9	10	8
1249:	7	8	9	8	13	7	8	5
1257:	5	5	9	8	7	8	9	8
1265:	4	5	8	4	10	8	8	3
1273:	9	4	11	10	7	7	10	20
1281:	12	6	5	4	7	10	5	3
1289:	5	3	5	7	4	9	6	6
1297:	4	6	3	4	4	1	4	7
1305:	4	6	8	5	8	6	4	5
1313:	4	6	4	6	6	9	3	9
1321:	5	4	0	6	3	3	6	4
1329:	7	5	3	3	8	4	8	2
1337:	3	3	3	2	2	3	7	12
1345:	10	4	2	3	4	6	5	5
1353:	6	4	2	1	4	1	3	5
1361:	3	4	3	2	5	1	1	3
1369:	1	4	1	6	2	6	4	11
1377:	19	16	8	4	3	2	6	5
1385:	8	8	1	3	3	3	6	1

1393:	2	2	6	8	5	4	1	7
1401:	6	6	4	2	5	5	7	9
1409:	6	3	2	4	0	3	2	4
1417:	3	1	4	5	3	5	5	1
1425:	3	3	6	3	4	3	4	6
1433:	2	2	6	6	9	5	7	3
1441:	3	2	4	7	4	4	1	2
1449:	5	4	4	4	6	2	1	5
1457:	2	13	82	319	325	80	18	12
1465:	8	3	4	0	2	3	0	2
1473:	2	3	0	2	0	0	3	1
1481:	5	2	3	4	4	2	2	2
1489:	1	3	2	0	1	2	4	3
1497:	3	3	3	3	0	5	1	0
1505:	2	2	3	6	6	4	2	4
1513:	8	2	4	1	3	3	3	6
1521:	2	3	2	3	5	1	1	4
1529:	0	1	2	1	6	4	1	2
1537:	1	4	3	2	1	1	3	4
1545:	2	1	1	3	4	3	3	3
1553:	3	4	3	2	0	2	3	2
1561:	1	2	1	0	4	1	5	2
1569:	3	3	2	0	1	3	3	3
1577:	3	4	2	2	2	1	4	1
1585:	3	3	7	7	2	3	2	2
1593:	6	5	7	4	4	1	3	2
1601:	1	1	2	0	1	2	1	1
1609:	1	2	1	1	1	2	1	3
1617:	0	3	2	5	5	4	1	0
1625:	0	0	1	1	6	3	0	4
1633:	1	2	2	2	2	1	0	1
1641:	0	0	1	5	2	0	2	0
1649:	2	0	1	1	0	4	4	4
1657:	3	3	2	1	7	3	0	1
1665:	1	2	3	2	1	0	2	1
1673:	1	4	1	2	1	2	1	1
1681:	2	1	3	2	3	0	1	4
1689:	1	0	4	2	3	1	3	3
1697:	0	0	0	2	1	2	3	0
1705:	0	2	2	2	5	2	2	1
1713:	2	0	1	1	1	1	0	1
1721:	0	1	1	0	2	0	0	3
1729:	13	10	3	3	1	0	2	0
1737:	3	4	0	1	2	0	0	1
1745:	2	1	1	2	0	1	2	4
1753:	2	1	0	0	0	1	2	2
1761:	0	1	26	42	38	7	3	3
1769:	1	0	1	1	1	0	1	0
1777:	1	0	0	1	0	0	2	2
1785:	1	2	3	0	0	0	3	1
1793:	0	0	1	2	0	1	1	0
1801:	2	0	1	3	0	2	0	0
1809:	0	1	1	2	3	0	1	2
1817:	2	3	1	1	0	0	2	1
1825:	0	2	1	0	0	1	0	1
1833:	1	1	0	1	1	2	2	3
1841:	1	1	1	4	2	2	14	3
1849:	0	0	0	0	2	0	2	0
1857:	2	0	0	1	2	0	0	1
1865:	0	0	0	0	3	0	3	2

1873:	1	2	0	1	0	2	0	1
1881:	1	3	1	1	2	1	1	3
1889:	1	3	1	2	2	2	0	2
1897:	1	1	0	1	2	0	0	1
1905:	0	2	1	0	1	0	1	2
1913:	3	0	2	0	2	2	1	0
1921:	1	2	1	2	3	1	3	3
1929:	1	1	0	1	3	0	1	1
1937:	2	0	1	2	1	2	1	0
1945:	1	2	2	3	2	0	2	0
1953:	0	1	0	0	3	1	1	4
1961:	0	1	3	1	0	3	0	0
1969:	0	1	1	0	0	2	1	0
1977:	1	0	0	0	0	1	0	1
1985:	1	1	0	0	1	0	1	1
1993:	3	0	0	0	1	0	1	2
2001:	2	2	0	0	2	1	1	1
2009:	1	1	0	1	0	0	2	1
2017:	2	1	1	0	0	0	0	1
2025:	0	1	0	1	1	0	1	0
2033:	3	0	1	2	0	2	1	1
2041:	0	1	0	3	1	1	0	1
2049:	2	0	1	1	1	1	3	0
2057:	1	0	2	2	2	1	1	1
2065:	2	0	1	2	3	0	0	1
2073:	2	0	1	0	0	1	2	0
2081:	0	0	0	1	0	1	0	2
2089:	0	0	2	0	4	0	1	1
2097:	1	0	1	0	1	3	5	2
2105:	1	0	1	0	1	1	0	0
2113:	0	0	1	3	3	7	2	1
2121:	2	0	2	2	1	1	2	2
2129:	2	0	1	2	0	1	1	1
2137:	1	1	0	0	0	0	1	1
2145:	2	3	0	1	0	4	1	1
2153:	0	1	0	0	0	2	2	0
2161:	0	0	0	2	2	2	0	0
2169:	1	1	1	1	0	2	0	1
2177:	1	1	1	0	0	1	1	0
2185:	1	1	0	0	1	2	1	1
2193:	2	0	0	1	2	0	0	1
2201:	0	5	5	7	3	4	1	0
2209:	0	1	0	0	2	1	0	1
2217:	2	1	1	1	1	1	0	1
2225:	0	3	0	2	1	1	0	0
2233:	0	0	0	0	2	4	1	0
2241:	2	0	1	0	0	1	1	1
2249:	1	0	1	1	0	1	1	3
2257:	1	0	3	2	1	1	2	0
2265:	2	0	2	2	0	1	1	1
2273:	2	2	0	1	2	2	0	0
2281:	0	2	0	0	0	0	0	1
2289:	2	0	1	0	0	0	2	1
2297:	0	0	0	0	1	1	2	0
2305:	0	0	0	0	1	1	2	0
2313:	2	2	1	1	1	1	1	0
2321:	1	0	0	0	0	0	1	0
2329:	0	2	0	1	2	4	1	0
2337:	0	0	1	1	0	2	0	1
2345:	2	1	0	2	2	1	0	0

2353:	2	1	1	1	0	2	2	2
2361:	0	3	1	0	0	1	1	0
2369:	3	1	0	1	1	3	2	0
2377:	0	0	2	4	0	4	1	0
2385:	2	0	1	0	3	1	2	1
2393:	1	0	0	0	1	1	0	1
2401:	0	1	0	1	0	1	0	0
2409:	1	1	0	0	1	2	2	1
2417:	0	1	2	0	0	0	0	1
2425:	2	0	1	1	0	1	1	0
2433:	0	1	1	0	1	0	1	0
2441:	0	0	0	3	1	3	6	4
2449:	0	0	1	0	0	0	0	3
2457:	0	1	0	0	4	0	0	0
2465:	1	1	0	0	1	0	0	1
2473:	1	0	1	0	0	0	0	0
2481:	0	0	3	2	1	0	0	0
2489:	2	0	1	0	0	1	0	0
2497:	0	1	0	0	0	0	1	0
2505:	0	1	0	1	0	0	0	0
2513:	1	0	0	1	1	0	0	0
2521:	0	0	0	1	0	2	1	1
2529:	0	0	0	0	1	0	0	1
2537:	0	1	1	2	0	0	0	0
2545:	0	0	0	1	1	1	1	1
2553:	3	0	0	0	0	0	0	0
2561:	0	1	0	0	0	0	0	0
2569:	1	0	1	1	0	1	0	1
2577:	1	0	0	1	0	0	0	1
2585:	0	0	1	0	0	1	0	0
2593:	0	0	0	0	1	0	0	0
2601:	0	1	0	0	0	0	1	0
2609:	1	0	3	10	25	35	24	4
2617:	1	0	0	1	1	0	0	0
2625:	0	0	0	0	1	0	0	0
2633:	1	1	0	0	1	0	0	0
2641:	0	0	0	0	0	0	0	0
2649:	0	0	0	1	0	1	1	0
2657:	0	0	0	1	0	2	0	0
2665:	1	0	0	0	0	0	0	0
2673:	0	0	1	0	0	0	0	0
2681:	1	1	0	0	1	0	0	1
2689:	1	0	0	0	0	0	0	0
2697:	0	0	0	0	0	0	1	2
2705:	0	0	0	1	1	0	0	0
2713:	0	0	0	0	0	0	0	0
2721:	1	0	0	1	0	0	0	0
2729:	0	0	0	1	1	0	1	1
2737:	0	0	0	0	1	0	1	0
2745:	2	0	1	0	0	0	0	0
2753:	0	1	1	1	0	0	1	1
2761:	0	1	1	0	0	0	0	0
2769:	1	0	0	0	0	0	0	1
2777:	0	0	1	0	0	0	0	0
2785:	0	1	0	0	0	0	1	0
2793:	0	0	0	0	0	0	0	0
2801:	1	0	0	1	0	1	0	0
2809:	0	0	0	0	0	0	1	0
2817:	1	0	1	1	0	0	0	0
2825:	0	0	0	0	1	0	0	0

2833:	0	1	0	1	0	0	0	0
2841:	0	3	0	0	0	1	0	0
2849:	0	0	1	0	0	0	1	0
2857:	1	0	0	1	0	0	0	0
2865:	0	0	0	0	0	1	1	0
2873:	0	0	0	0	0	0	0	0
2881:	1	1	1	0	0	0	0	0
2889:	2	1	0	2	0	0	0	0
2897:	0	0	0	0	0	0	1	0
2905:	0	0	0	0	0	0	1	0
2913:	0	0	2	0	0	0	0	1
2921:	0	0	0	0	0	0	0	0
2929:	0	0	0	0	0	0	0	0
2937:	0	0	1	0	0	0	0	0
2945:	0	0	0	1	0	0	0	0
2953:	0	0	1	1	0	0	0	0
2961:	1	1	0	2	0	0	0	0
2969:	0	0	0	0	0	0	0	0
2977:	0	0	1	0	0	0	0	0
2985:	1	0	0	0	0	0	1	0
2993:	0	0	0	0	0	0	1	0
3001:	0	1	1	1	0	0	0	0
3009:	1	0	1	0	1	0	0	0
3017:	0	0	1	1	0	0	0	0
3025:	0	0	0	0	0	0	0	0
3033:	0	0	1	0	0	0	0	0
3041:	0	0	0	0	0	0	0	0
3049:	0	0	0	0	0	0	0	1
3057:	0	0	0	0	0	0	0	0
3065:	1	0	0	0	0	0	0	0
3073:	0	0	0	0	1	1	0	0
3081:	0	0	0	0	0	0	1	0
3089:	0	0	1	0	0	0	0	0
3097:	0	0	0	0	0	1	0	0
3105:	0	0	1	0	0	0	0	0
3113:	0	1	0	1	0	1	0	1
3121:	0	0	0	0	0	0	1	1
3129:	0	1	1	0	0	0	0	0
3137:	0	0	0	0	0	0	0	0
3145:	0	1	0	1	0	0	0	0
3153:	0	0	1	0	0	0	0	1
3161:	0	0	0	0	0	0	0	0
3169:	0	1	0	0	0	0	0	0
3177:	0	0	0	0	1	0	0	0
3185:	0	0	1	0	0	0	0	0
3193:	0	0	0	2	1	1	0	1
3201:	0	0	0	0	0	0	0	0
3209:	0	0	0	0	0	0	0	0
3217:	0	0	0	0	1	0	0	0
3225:	1	0	0	0	1	1	0	0
3233:	0	0	0	1	0	0	0	0
3241:	0	0	0	0	0	0	0	0
3249:	0	0	0	1	1	0	0	0
3257:	0	0	0	0	0	0	0	0
3265:	0	0	1	0	0	1	0	0
3273:	0	0	0	0	1	0	0	0
3281:	0	0	0	0	0	0	0	0
3289:	0	0	0	0	0	0	0	0
3297:	0	0	1	0	0	0	0	0
3305:	1	0	0	0	0	0	0	0

2833:	0	1	0	1	0	0	0	0
2841:	0	3	0	0	0	1	0	0
2849:	0	0	1	0	0	0	1	0
2857:	1	0	0	1	0	0	0	0
2865:	0	0	0	0	0	1	1	0
2873:	0	0	0	0	0	0	0	0
2881:	1	1	1	0	0	0	0	0
2889:	2	1	0	2	0	0	0	0
2897:	0	0	0	0	0	0	1	0
2905:	0	0	0	0	0	0	1	0
2913:	0	0	2	0	0	0	0	1
2921:	0	0	0	0	0	0	0	0
2929:	0	0	0	0	0	0	0	0
2937:	0	0	1	0	0	0	0	0
2945:	0	0	0	1	0	0	0	0
2953:	0	0	1	1	0	0	0	0
2961:	1	1	0	2	0	0	0	0
2969:	0	0	0	0	0	0	0	0
2977:	0	0	1	0	0	0	0	0
2985:	1	0	0	0	0	0	1	0
2993:	0	0	0	0	0	0	1	0
3001:	0	1	1	1	0	0	0	0
3009:	1	0	1	0	1	0	0	0
3017:	0	0	1	1	0	0	0	0
3025:	0	0	0	0	0	0	0	0
3033:	0	0	1	0	0	0	0	0
3041:	0	0	0	0	0	0	0	0
3049:	0	0	0	0	0	0	0	1
3057:	0	0	0	0	0	0	0	0
3065:	1	0	0	0	0	0	0	0
3073:	0	0	0	0	1	1	0	0
3081:	0	0	0	0	0	0	1	0
3089:	0	0	1	0	0	0	0	0
3097:	0	0	0	0	0	1	0	0
3105:	0	0	1	0	0	0	0	0
3113:	0	1	0	1	0	1	0	1
3121:	0	0	0	0	0	0	1	1
3129:	0	1	1	0	0	0	0	0
3137:	0	0	0	0	0	0	0	0
3145:	0	1	0	1	0	0	0	0
3153:	0	0	1	0	0	0	0	1
3161:	0	0	0	0	0	0	0	0
3169:	0	1	0	0	0	0	0	0
3177:	0	0	0	0	1	0	0	0
3185:	0	0	1	0	0	0	0	0
3193:	0	0	0	2	1	1	0	1
3201:	0	0	0	0	0	0	0	0
3209:	0	0	0	0	0	0	0	0
3217:	0	0	0	0	1	0	0	0
3225:	1	0	0	0	1	1	0	0
3233:	0	0	0	1	0	0	0	0
3241:	0	0	0	0	0	0	0	0
3249:	0	0	0	1	1	0	0	0
3257:	0	0	0	0	0	0	0	0
3265:	0	0	1	0	0	1	0	0
3273:	0	0	0	0	1	0	0	0
3281:	0	0	0	0	0	0	0	0
3289:	0	0	0	0	0	0	0	0
3297:	0	0	1	0	0	0	0	0
3305:	1	0	0	0	0	0	0	0



3313:	0	0	0	1	0	1	0	0
3321:	0	0	0	0	0	0	0	0
3329:	0	0	0	0	0	0	0	0
3337:	0	0	1	0	1	0	0	0
3345:	0	0	0	0	0	0	0	0
3353:	0	0	0	0	0	0	0	1
3361:	0	0	0	0	0	0	0	0
3369:	0	0	0	0	0	0	1	1
3377:	0	0	0	0	0	1	0	0
3385:	0	1	0	0	0	0	0	1
3393:	0	0	0	0	0	0	0	0
3401:	0	0	0	0	0	0	0	0
3409:	0	0	0	1	1	0	0	0
3417:	0	1	1	0	0	1	0	0
3425:	0	0	0	0	0	0	0	0
3433:	0	0	0	0	1	0	0	0
3441:	0	0	0	0	0	0	0	0
3449:	1	0	0	0	0	0	0	0
3457:	0	0	0	0	0	0	1	0
3465:	0	1	0	0	0	0	0	0
3473:	0	1	1	0	1	0	0	0
3481:	0	0	0	0	1	0	0	0
3489:	0	0	1	0	0	1	0	0
3497:	0	1	0	0	1	1	0	0
3505:	1	2	1	0	0	0	0	0
3513:	0	0	0	0	0	0	0	0
3521:	0	0	0	0	0	1	0	0
3529:	0	1	0	0	0	0	0	0
3537:	0	0	0	0	0	0	0	0
3545:	0	0	0	0	0	0	0	0
3553:	0	0	0	0	1	0	0	0
3561:	0	0	0	0	0	0	0	0
3569:	0	0	0	2	0	0	1	0
3577:	0	0	0	0	0	0	0	1
3585:	0	0	0	0	0	0	0	0
3593:	1	2	0	0	0	0	1	0
3601:	0	0	2	0	0	0	0	1
3609:	0	0	0	0	0	0	0	0
3617:	0	1	0	0	0	0	0	0
3625:	0	0	0	1	1	0	0	0
3633:	0	0	0	0	0	0	0	0
3641:	0	0	0	0	1	1	0	0
3649:	0	0	1	0	0	0	2	0
3657:	0	0	0	0	0	0	0	0
3665:	0	0	0	0	0	0	0	1
3673:	1	0	0	0	0	0	1	1
3681:	0	0	0	0	0	0	0	0
3689:	0	0	0	0	0	0	0	0
3697:	0	0	0	0	0	0	0	0
3705:	0	0	0	0	0	0	0	0
3713:	0	2	0	1	0	0	0	0
3721:	0	0	1	0	0	0	0	0
3729:	0	0	0	0	0	0	0	0
3737:	1	2	1	0	0	0	0	1
3745:	0	0	0	0	0	0	0	0
3753:	0	0	0	0	0	1	0	0
3761:	0	0	0	0	0	0	0	0
3769:	0	0	0	0	0	0	0	0
3777:	0	0	0	0	0	1	0	0
3785:	0	0	0	0	0	0	0	1

3793:	1	0	0	0	0	0	1	0
3801:	0	0	0	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0
3817:	1	0	0	0	0	1	0	0
3825:	0	0	0	1	0	0	0	0
3833:	0	1	0	0	0	0	0	0
3841:	0	0	0	0	0	0	0	1
3849:	0	0	0	0	0	0	0	0
3857:	0	0	0	1	0	0	0	0
3865:	0	0	0	1	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	0	0	0	0	1	0	0	0
3897:	0	0	0	0	0	0	0	0
3905:	0	1	0	0	0	0	0	0
3913:	0	0	0	0	0	0	0	0
3921:	0	0	0	0	0	1	0	0
3929:	0	0	0	0	0	0	0	0
3937:	0	1	0	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	0	2	0	0	1
3969:	0	0	0	0	0	0	0	1
3977:	0	0	0	1	0	0	0	0
3985:	0	1	0	0	0	0	0	0
3993:	0	1	1	0	0	0	1	1
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	1	0	0
4025:	0	0	1	0	0	0	0	1
4033:	0	0	0	0	0	0	0	0
4041:	0	0	0	0	0	0	0	0
4049:	0	0	1	0	0	1	0	0
4057:	0	0	0	0	0	0	1	0
4065:	0	1	0	0	0	0	0	0
4073:	0	0	1	0	0	0	0	0
4081:	1	0	0	0	0	0	0	0
4089:	0	0	0	0	0	0	0	0

Sample ID : 1109167-14

Acquisition date : 25-OCT-2011 09:56:20

Page : 1

VAX/VMS Peak Search Report Generated 25-OCT-2011 10:56:42.08

Configuration : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916714\_GE2\_GAS1102\_169790.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : JBBKGD-W-31-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 09:56:20  
 Sample ID : 1109167-14 Sample Quantity : 5.80980E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE2 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.25 0.0%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	46.56*	170	1009	1.87	46.51	42	9	71.3		PB-210
0	76.32*	981	1080	3.30	76.28	72	9	13.8		
0	89.33	141	857	3.59	89.30	85	7	71.5		CD-109
0	153.82	62	438	2.14	153.80	151	7	115.3		
0	185.92*	249	375	1.58	185.92	182	7	30.1		RA-226
2	238.65*	510	238	1.87	238.68	233	13	13.7	5.27E+00	PB-212
2	242.00*	249	214	1.87	242.02	233	13	26.9		RA-224
0	269.41	63	341	2.85	269.45	264	10	112.8		CS-135
1	295.10*	397	117	1.44	295.15	290	22	12.7	2.09E+00	PB-214
1	300.12	55	133	1.77	300.16	290	22	69.9		PB-212
0	338.30*	135	152	1.87	338.36	335	7	35.4		
0	351.73*	708	158	1.48	351.79	347	8	9.8		PB-214
0	462.54	34	86	1.25	462.65	459	6	92.7		
0	510.57*	100	116	2.82	510.69	506	11	51.6		
0	582.98*	182	104	1.57	583.13	578	10	26.3		
0	594.06	17	46	2.66	594.21	592	5	130.1		
0	608.93*	547	93	1.79	609.09	605	9	10.8		BI-214
0	631.47	21	50	4.39	631.64	628	7	120.7		
0	660.98*	68	101	8.68	661.16	655	13	66.2		CS-137
0	685.41	29	63	4.40	685.60	681	9	106.6		
0	768.04	54	65	1.37	768.26	765	7	56.8		
0	785.78	23	62	3.32	786.01	783	7	122.0		
0	860.25	29	42	1.74	860.50	856	7	82.9		
0	910.61	114	70	2.12	910.88	906	9	32.3		
0	933.53	43	33	2.03	933.81	930	7	54.3		
0	1120.00*	98	71	1.58	1120.35	1116	8	36.6		BI-214
0	1136.12	24	61	2.85	1136.48	1132	10	126.2		
0	1237.39*	48	96	2.68	1237.79	1233	13	90.7		
0	1280.56*	21	35	2.62	1280.97	1276	8	111.9		
0	1294.02	15	22	3.54	1294.44	1291	7	120.7		
0	1347.43	9	7	1.54	1347.86	1345	5	115.1		
0	1377.92	20	29	1.51	1378.37	1373	9	106.0		
0	1408.36	30	20	1.44	1408.82	1405	12	73.4		
0	1426.12	23	19	4.03	1426.58	1419	15	91.4		
0	1459.87*	678	39	2.22	1460.35	1455	12	8.6		K-40
0	1508.22	22	16	1.36	1508.72	1505	9	79.4		

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It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	1661.36	23	10	1.42	1661.92	1656	13	69.7		
0	1701.32	9	4	1.56	1701.89	1698	8	104.5		
0	1716.54	9	0	5.74	1717.11	1713	8	66.7		
0	1727.97	22	4	2.19	1728.55	1724	8	53.3		
0	1740.49	9	2	2.60	1741.08	1737	7	81.7		
0	1763.14*	101	9	1.98	1763.74	1758	12	23.7		BI-214
0	1795.69	6	1	2.67	1796.29	1794	5	105.0		
0	1807.16	13	0	2.79	1807.77	1803	9	55.5		AL-26
0	1846.38	20	3	4.04	1847.00	1841	11	54.0		
0	1860.55	11	0	1.00	1861.18	1856	9	60.3		
0	1889.49	7	6	2.06	1890.13	1885	8	139.8		
0	1903.05	6	2	2.61	1903.69	1899	7	109.7		
0	2092.84	9	0	2.70	2093.56	2090	7	66.7		
0	2101.64	14	0	2.58	2102.36	2098	9	53.5		
0	2202.54	36	2	2.95	2203.29	2199	8	36.1		
0	2367.18	7	0	2.99	2368.00	2364	7	75.6		
0	2380.41	13	0	2.96	2381.23	2377	8	55.5		
0	2445.52	12	2	3.34	2446.37	2441	9	75.2		
0	2612.40*	79	0	2.83	2613.31	2608	11	24.0		

Total number of lines in spectrum 55  
Number of unidentified lines 30  
Number of lines tentatively identified by NID 25 45.45%

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
AL-26	7.20E+05Y	1.00	4.181E-02	4.181E-02	2.356E-02	56.34	
CS-135	2.30E+06Y	1.00	3.014E-01	3.014E-01	3.411E-01	113.17	
Total Activity :			3.433E-01	3.433E-01			

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.793E+01	1.793E+01	0.250E+01	13.96	
PB-210	22.26Y	1.00	2.461E+00	2.467E+00	1.773E+00	71.87	
PB-212	1.41E+10Y	1.00	8.238E-01	8.238E-01	1.326E-01	16.09	
BI-214	1602.00Y	1.00	1.739E+00	1.739E+00	0.210E+00	12.09	
PB-214	1602.00Y	1.00	1.743E+00	1.743E+00	0.181E+00	10.36	
RA-224	1.41E+10Y	1.00	4.509E+00	4.509E+00	1.282E+00	28.43	
RA-226	1602.00Y	1.00	4.676E+00	4.676E+00	8.679E+00	185.61	
Total Activity :			3.388E+01	3.388E+01			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	1.865E+00	1.943E+00	1.423E+00	73.22	
CS-137	30.17Y	1.00	1.246E-01	1.248E-01	0.835E-01	66.91	
Total Activity :			1.990E+00	2.068E+00			

Grand Total Activity : 3.621E+01 3.630E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Nuclide Type: ACTIVATION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
AL-26	1808.65	99.76*	4.027E-01	4.181E-02	4.181E-02	56.34	OK

Final Mean for 1 Valid Peaks = 4.181E-02+/- 2.356E-02 ( 56.34%)

CS-135	268.24	16.00*	1.682E+00	3.014E-01	3.014E-01	113.17	OK
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Final Mean for 1 Valid Peaks = 3.014E-01+/- 3.411E-01 (113.17%)

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
K-40	1460.81	10.67*	4.582E-01	1.793E+01	1.793E+01	13.96	OK

Final Mean for 1 Valid Peaks = 1.793E+01+/- 2.502E+00 ( 13.96%)

PB-210	46.50	4.05*	2.204E+00	2.461E+00	2.467E+00	71.87	OK
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Final Mean for 1 Valid Peaks = 2.467E+00+/- 1.773E+00 ( 71.87%)

PB-212	238.63	44.60*	1.817E+00	8.135E-01	8.135E-01	16.46	OK
	300.09	3.41	1.555E+00	1.332E+00	1.332E+00	70.48	OK

Final Mean for 2 Valid Peaks = 8.238E-01+/- 1.326E-01 ( 16.09%)

BI-214	609.31	46.30*	8.915E-01	1.714E+00	1.714E+00	14.62	OK
	1120.29	15.10	5.508E-01	1.522E+00	1.522E+00	37.95	OK
	1764.49	15.80	4.084E-01	2.023E+00	2.023E+00	25.76	OK
	2204.22	4.98	3.644E-01	-----	Line Not Found	-----	Absent

Final Mean for 3 Valid Peaks = 1.739E+00+/- 2.103E-01 ( 12.09%)

PB-214	295.21	19.19	1.574E+00	1.699E+00	1.699E+00	15.72	OK
	351.92	37.19*	1.383E+00	1.780E+00	1.780E+00	13.77	OK

Final Mean for 2 Valid Peaks = 1.743E+00+/- 1.806E-01 ( 10.36%)

RA-224	240.98	3.95*	1.806E+00	4.509E+00	4.509E+00	28.43	OK
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Final Mean for 1 Valid Peaks = 4.509E+00+/- 1.282E+00 ( 28.43%)

RA-226	186.21	3.28*	2.099E+00	4.676E+00	4.676E+00	185.61	OK
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Final Mean for 1 Valid Peaks = 4.676E+00+/- 8.679E+00 (185.61%)

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CD-109	88.03	3.72*	2.618E+00	1.865E+00	1.943E+00	73.22	OK

Final Mean for 1 Valid Peaks = 1.943E+00+/- 1.423E+00 ( 73.22%)

CS-137	661.65	85.12*	8.333E-01	1.246E-01	1.248E-01	66.91	OK
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Final Mean for 1 Valid Peaks = 1.248E-01+/- 8.352E-02 ( 66.91%)

Flag: "\*" = Keyline

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AL-26	4.181E-02	2.356E-02	5.309E-02	4.799E-03	0.788
K-40	1.793E+01	2.502E+00	6.311E-01	6.471E-02	28.405
CD-109	1.943E+00	1.423E+00	1.666E+00	2.570E-01	1.167
CS-135	3.014E-01	3.411E-01	2.845E-01	2.338E-02	1.060
CS-137	1.248E-01	8.352E-02	6.933E-02	5.988E-03	1.800
PB-210	2.467E+00	1.773E+00	1.444E+00	1.211E-01	1.708
PB-212	8.238E-01	1.326E-01	1.087E-01	8.945E-03	7.576
BI-214	1.739E+00	2.103E-01	1.206E-01	1.082E-02	14.420
PB-214	1.743E+00	1.806E-01	1.262E-01	1.105E-02	13.815
RA-224	4.509E+00	1.282E+00	1.236E+00	1.017E-01	3.646
RA-226	4.676E+00	8.679E+00	1.457E+00	2.668E+00	3.208

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-6.302E-02		4.282E-01	7.630E-01	7.055E-02	-0.083
NA-22	-4.935E-02		5.746E-02	7.706E-02	7.595E-03	-0.640
TI-44	-4.050E-02		3.676E-02	5.494E-02	5.151E-03	-0.737
SC-46	4.047E-02		4.585E-02	8.850E-02	7.934E-03	0.457
V-48	-1.884E-02		1.283E-01	2.244E-01	2.054E-02	-0.084
CR-51	1.058E-01		5.915E-01	9.823E-01	8.846E-02	0.108
MN-54	1.458E-02		4.036E-02	7.408E-02	6.650E-03	0.197
CO-56	-7.228E-03		4.598E-02	8.087E-02	7.261E-03	-0.089
CO-57	1.589E-03		3.339E-02	5.558E-02	4.714E-03	0.029
CO-58	-3.787E-02		4.544E-02	7.429E-02	6.674E-03	-0.510
FE-59	-1.120E-01		1.075E-01	1.653E-01	1.641E-02	-0.678
CO-60	-2.428E-03		5.112E-02	9.045E-02	8.388E-03	-0.027
ZN-65	1.190E-01		1.224E-01	2.101E-01	1.952E-02	0.566
SE-75	-3.573E-02		6.075E-02	8.786E-02	7.281E-03	-0.407
RB-82	-2.042E-01		6.630E-01	1.019E+00	9.094E-02	-0.200
RB-83	2.226E-02		8.846E-02	1.471E-01	2.353E-02	0.151
KR-85	1.235E+01		8.459E+00	1.516E+01	1.404E+00	0.815
SR-85	7.205E-02		4.935E-02	8.843E-02	8.189E-03	0.815
Y-88	2.255E-03		2.641E-02	5.101E-02	4.553E-03	0.044
NB-93M	-4.099E+01		1.266E+01	2.512E+00	7.564E-01	-16.317
NB-94	-1.843E-02		3.944E-02	6.685E-02	6.000E-03	-0.276
NB-95	1.908E-01		8.022E-02	1.521E-01	1.356E-02	1.254
NB-95M	8.362E+01		2.745E+01	4.916E+01	4.042E+00	1.701
ZR-95	-2.080E-02		8.844E-02	1.545E-01	1.505E-02	-0.135
RU-103	-3.729E-02		5.547E-02	9.482E-02	1.381E-02	-0.393
RU-106	4.396E-01		3.351E-01	6.399E-01	8.666E-02	0.687
AG-108M	-3.359E-02		4.171E-02	6.906E-02	6.089E-03	-0.486
AG-110M	3.741E-02		4.133E-02	7.846E-02	6.788E-03	0.477
SN-113	-4.199E-02		5.114E-02	8.772E-02	8.076E-03	-0.479
TE123M	4.979E-03		4.208E-02	6.504E-02	5.232E-03	0.077
SB-124	-2.717E-02		5.284E-02	8.042E-02	7.247E-03	-0.338
I-125	1.979E-01		9.124E-01	1.580E+00	1.621E-01	0.125



---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-125	5.192E-02		9.839E-02	1.835E-01	1.702E-02	0.283
SB-126	-8.846E-02		3.287E-01	5.718E-01	5.037E-02	-0.155
SN-126	-3.106E-02		9.497E-02	1.578E-01	2.230E-02	-0.197
SB-127	1.791E+01	+	1.917E+01	2.546E+01	2.216E+00	0.704
I-129	1.884E-02		8.763E-02	1.524E-01	1.868E-02	0.124
I-131	2.620E-01		3.524E-01	6.639E-01	5.861E-02	0.395
BA-133	3.356E-02		5.067E-02	8.101E-02	1.078E-02	0.414
CS-134	2.345E-03		4.103E-02	6.620E-02	5.972E-03	0.035
CS-136	-1.008E-01		2.191E-01	3.681E-01	3.489E-02	-0.274
LA-138	4.662E-03		5.844E-02	9.548E-02	9.625E-03	0.049
CE-139	-1.209E-03		3.821E-02	6.352E-02	5.057E-03	-0.019
BA-140	1.455E-01		5.223E-01	9.590E-01	3.194E-01	0.152
LA-140	-1.061E-01		1.693E-01	2.962E-01	2.890E-02	-0.358
CE-141	2.452E-02		1.040E-01	1.766E-01	4.133E-02	0.139
CE-144	1.178E-02		2.698E-01	4.519E-01	3.767E-02	0.026
PM-144	-2.466E-02		3.985E-02	6.734E-02	5.892E-03	-0.366
PM-145	1.732E-02		1.936E-01	3.334E-01	2.176E-01	0.052
PM-146	1.853E-02		8.074E-02	1.340E-01	1.233E-02	0.138
ND-147	1.164E-01		1.300E+00	2.359E+00	2.181E-01	0.049
EU-152	5.564E-01	+	4.148E-01	5.851E-01	7.097E-02	0.951
GD-153	-5.525E-02		1.268E-01	2.098E-01	2.445E-02	-0.263
EU-154	-1.344E-01		1.597E-01	2.150E-01	2.119E-02	-0.625
EU-155	1.235E-01		1.181E-01	1.886E-01	2.614E-02	0.655
EU-156	-7.291E-01		1.183E+00	1.968E+00	4.520E-01	-0.371
HO-166M	-3.360E-02		6.740E-02	1.151E-01	1.011E-02	-0.292
HF-172	-1.207E-01		2.491E-01	4.086E-01	3.443E-02	-0.295
LU-172	2.119E-01		1.033E+00	1.886E+00	1.749E-01	0.112
LU-173	6.169E-02		1.711E-01	2.639E-01	2.168E-02	0.234
HF-175	8.872E-03		5.617E-02	7.534E-02	6.558E-03	0.118
LU-176	3.685E-02		3.295E-02	5.736E-02	4.841E-03	0.642
TA-182	7.780E-01	+	2.952E-01	4.826E-01	4.479E-02	1.612
IR-192	-1.396E-02		8.526E-02	1.367E-01	1.262E-02	-0.102
HG-203	2.122E-02		5.559E-02	9.359E-02	7.913E-03	0.227
BI-207	-1.017E-02		3.199E-02	5.541E-02	5.070E-03	-0.183
TL-208	8.419E-01	+	2.369E-01	3.492E-01	3.178E-02	2.411
BI-210M	1.509E-02		6.591E-02	1.018E-01	8.379E-03	0.148
PB-211	5.806E-01		1.050E+00	1.945E+00	1.754E-01	0.298
BI-212	3.251E-01		3.204E-01	6.059E-01	5.349E-02	0.537
RN-219	-3.396E-01		4.826E-01	8.329E-01	7.499E-02	-0.408
RA-223	-4.517E-01		8.142E-01	1.280E+00	1.097E-01	-0.353
RA-225	1.018E-01		4.980E-01	7.993E-01	7.419E-02	0.127
TH-227	1.333E+00		3.347E-01	5.984E-01	4.921E-02	2.228
AC-228	8.287E-01	+	2.795E-01	4.430E-01	3.984E-02	1.870
TH-230	-1.076E+01		9.367E+00	1.397E+01	1.303E+00	-0.770
PA-231	1.616E+00		1.339E+00	2.341E+00	1.968E-01	0.690
TH-231	-3.306E-01		4.134E-01	6.936E-01	1.021E-01	-0.477
PA-233	-1.344E-01		1.677E-01	2.313E-01	5.182E-02	-0.581
PA-234	-6.762E-02		1.347E-01	2.205E-01	1.844E-02	-0.307

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234M	6.198E-01		4.906E+00	8.806E+00	8.085E-01	0.070
TH-234	1.130E+00		8.689E-01	1.516E+00	1.262E-01	0.745
U-235	2.515E-02		2.701E-01	4.563E-01	7.900E-02	0.055
NP-237	2.996E-01		2.867E-01	4.577E-01	6.344E-02	0.655
AM-241	-2.956E-02		8.779E-02	1.478E-01	1.106E-02	-0.200
AM-243	3.735E-01		7.265E-02	1.124E-01	1.232E-02	3.323
CM-243	-6.022E-02		2.363E-01	3.502E-01	2.872E-02	-0.172

Total number of lines in spectrum 55  
Number of unidentified lines 30  
Number of lines tentatively identified by NID 25 45.45%

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
AL-26	7.20E+05Y	1.00	4.181E-02	4.181E-02	2.356E-02	56.34	
CS-135	2.30E+06Y	1.00	3.014E-01	3.014E-01	3.411E-01	113.17	
Total Activity :			3.433E-01	3.433E-01			

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.793E+01	1.793E+01	0.250E+01	13.96	
PB-210	22.26Y	1.00	2.461E+00	2.467E+00	1.773E+00	71.87	
PB-212	1.41E+10Y	1.00	8.238E-01	8.238E-01	1.326E-01	16.09	
BI-214	1602.00Y	1.00	1.739E+00	1.739E+00	0.210E+00	12.09	
PB-214	1602.00Y	1.00	1.743E+00	1.743E+00	0.181E+00	10.36	
RA-224	1.41E+10Y	1.00	4.509E+00	4.509E+00	1.282E+00	28.43	
RA-226	1602.00Y	1.00	4.676E+00	4.676E+00	8.679E+00	185.61	
Total Activity :			3.388E+01	3.388E+01			

Nuclide Type : FISSION

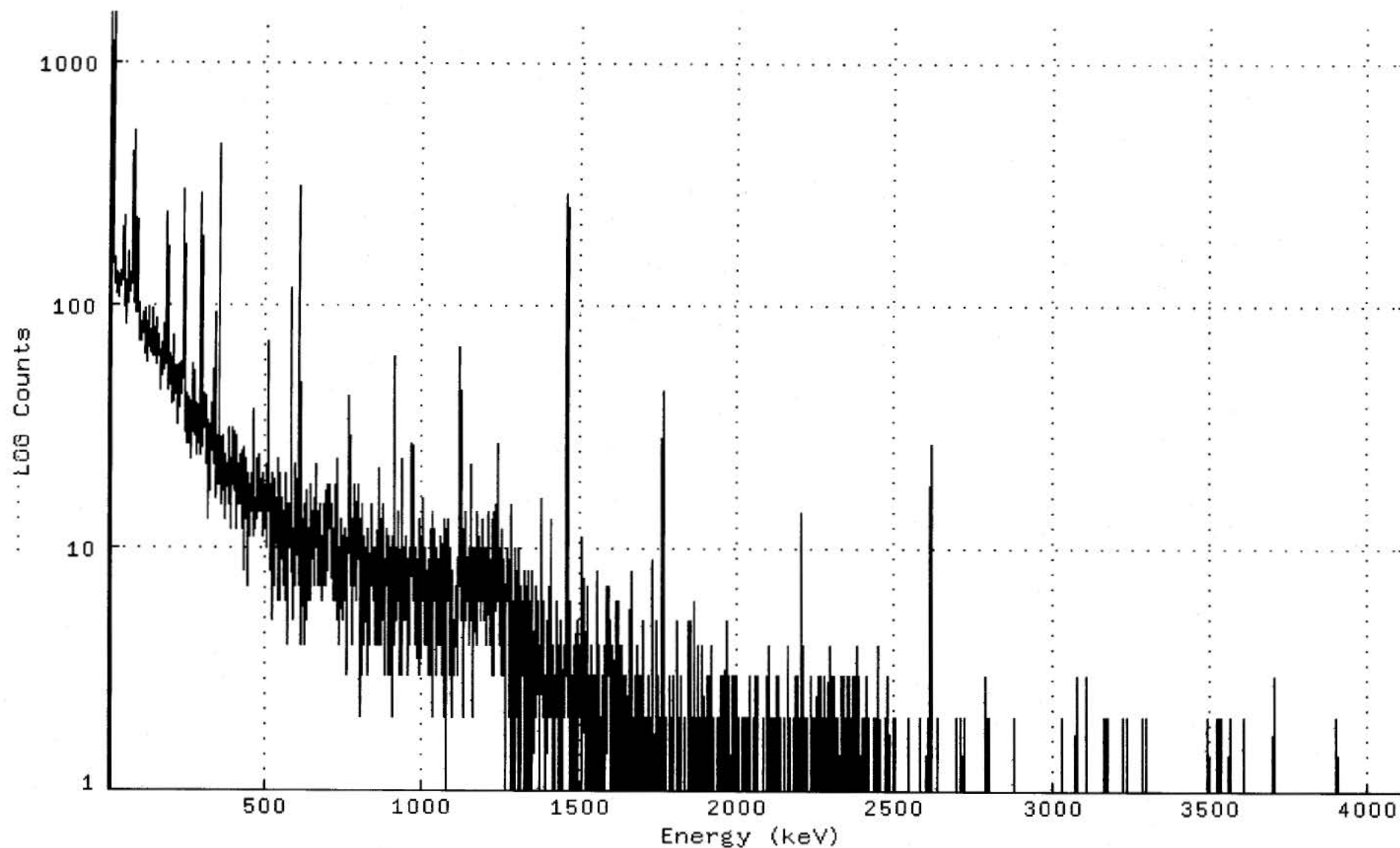
Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	1.865E+00	1.943E+00	1.423E+00	73.22	
CS-137	30.17Y	1.00	1.246E-01	1.248E-01	0.835E-01	66.91	
Total Activity :			1.990E+00	2.068E+00			

Grand Total Activity : 3.621E+01 3.630E+01

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916714\_GE2\_GAS1102\_169790.CNF;1  
Title :  
Sample Title: JBBKGD-W-31-110928  
Start Time: 25-OCT-2011 09:56 Sample Time: 28-SEP-2011 00:00 Energy Offset: 6.87229E-02  
Real Time : 0 01:00:01.25 Sample ID : 1109167-14 Energy Slope : 9.99625E-01  
Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00



## Channel Contents for DKA100: [GAMMA.SCUSR.ARCHIVE] SMP\_110916714\_GE2\_GAS1102\_1697

## Channel

1:	0	0	0	0	0	1	3	242
9:	742	1214	1135	375	836	1607	191	148
17:	156	141	145	131	121	142	129	132
25:	111	112	125	130	127	106	133	132
33:	110	133	130	119	136	127	133	135
41:	128	130	125	136	139	186	231	135
49:	110	101	97	99	109	91	83	106
57:	85	125	102	117	123	133	163	153
65:	116	113	121	117	115	128	142	121
73:	129	207	424	194	518	280	114	102
81:	119	105	113	174	106	92	227	173
89:	118	189	93	125	224	144	102	86
97:	70	90	86	102	83	73	81	73
105:	85	70	76	76	81	84	92	79
113:	77	92	78	95	66	62	80	58
121:	75	85	77	73	80	69	76	87
129:	98	67	74	68	75	78	78	76
137:	63	69	95	61	72	76	82	78
145:	74	77	72	78	64	57	62	65
153:	78	87	73	73	62	68	63	75
161:	61	62	65	63	65	44	55	64
169:	53	51	59	69	54	54	83	69
177:	63	65	75	59	57	61	58	69
185:	114	239	127	46	51	66	58	44
193:	48	62	49	58	62	47	59	58
201:	60	57	44	39	52	63	50	40
209:	74	64	49	43	45	52	55	49
217:	56	42	32	46	43	35	40	42
225:	51	46	53	57	58	56	55	43
233:	47	48	49	55	60	255	299	80
241:	103	175	64	35	37	30	43	40
249:	27	34	41	31	31	41	41	34
257:	39	27	38	40	40	23	28	35
265:	30	31	33	41	57	57	49	42
273:	29	44	30	31	45	31	33	32
281:	27	39	24	35	27	38	33	29
289:	33	30	28	32	24	68	288	126
297:	27	26	35	53	34	43	32	35
305:	34	35	31	42	37	23	24	24
313:	23	20	33	30	13	25	27	28
321:	26	28	17	28	31	34	32	39
329:	28	33	26	23	25	27	22	28
337:	32	93	69	31	16	23	25	29
345:	22	18	21	26	22	28	202	457
353:	112	18	22	22	24	23	28	16
361:	15	29	28	17	22	22	25	17
369:	22	16	19	14	13	24	20	20
377:	22	18	18	20	15	23	16	21
385:	31	22	23	22	20	20	12	20
393:	18	22	22	24	24	31	18	17
401:	30	25	22	18	25	26	29	12
409:	26	22	17	22	17	15	15	16
417:	15	15	19	24	22	15	20	18
425:	22	12	25	16	26	15	16	8

433:	18	18	16	21	13	13	14	23
441:	14	13	7	15	20	18	15	18
449:	15	11	13	16	20	16	18	15
457:	20	19	14	16	19	23	37	11
465:	14	13	14	16	16	15	12	16
473:	13	19	14	18	23	14	14	18
481:	20	24	15	15	17	19	16	19
489:	14	16	17	20	17	19	11	16
497:	18	12	12	12	15	13	17	22
505:	10	11	19	18	28	63	71	48
513:	14	18	12	13	8	11	17	16
521:	5	14	20	19	16	7	15	14
529:	10	19	12	12	13	16	15	12
537:	13	8	10	23	12	11	6	13
545:	18	20	11	13	6	15	10	9
553:	14	16	12	14	14	10	12	13
561:	12	7	14	6	7	20	12	15
569:	10	7	15	10	4	15	13	10
577:	15	14	14	14	16	49	116	48
585:	10	12	5	9	8	11	6	9
593:	16	7	22	9	12	13	19	11
601:	13	13	13	12	7	12	13	117
609:	310	163	14	14	10	12	10	4
617:	8	6	10	10	13	8	15	13
625:	13	9	7	4	14	7	17	10
633:	14	5	12	10	7	10	8	10
641:	6	11	18	6	6	8	9	9
649:	14	11	12	10	12	8	7	12
657:	16	13	12	17	22	19	10	17
665:	18	10	7	9	14	8	11	7
673:	15	7	9	10	12	9	8	6
681:	6	7	11	7	15	14	13	10
689:	9	7	9	12	17	9	12	10
697:	9	12	12	18	8	18	16	12
705:	15	18	15	10	9	15	8	12
713:	9	6	10	6	11	11	8	18
721:	11	9	10	6	7	16	23	16
729:	8	5	5	10	6	7	10	4
737:	6	8	8	7	10	12	13	6
745:	5	6	11	5	11	8	11	11
753:	6	9	9	12	10	7	10	3
761:	10	5	17	11	11	10	16	42
769:	20	11	9	7	11	12	11	8
777:	4	4	13	10	12	9	7	14
785:	18	16	15	9	6	13	15	8
793:	15	18	11	9	9	9	13	8
801:	9	11	2	9	6	15	5	6
809:	3	7	6	9	7	4	11	7
817:	9	10	10	8	6	8	8	3
825:	8	9	3	9	12	5	6	4
833:	7	9	6	15	12	8	7	9
841:	9	8	10	7	7	6	8	10
849:	6	7	10	4	6	4	6	4
857:	7	10	8	17	21	4	10	8
865:	9	6	4	9	4	13	6	10
873:	8	5	13	15	9	6	3	7
881:	9	6	8	7	8	12	11	8
889:	10	6	10	5	11	5	3	3
897:	4	10	8	8	5	2	7	6
905:	9	8	11	8	10	47	61	28

913:	7	4	10	7	5	6	8	7
921:	8	7	9	6	7	14	7	5
929:	3	6	8	7	12	23	17	3
937:	7	8	5	6	5	7	8	9
945:	11	9	8	9	8	5	5	9
953:	8	8	7	3	10	10	5	6
961:	4	5	11	14	9	9	8	27
969:	26	15	6	11	8	6	8	6
977:	10	4	6	7	7	8	6	6
985:	9	4	3	13	4	7	8	3
993:	4	4	6	4	11	5	8	11
1001:	8	16	6	6	8	10	6	7
1009:	7	4	7	6	6	7	4	8
1017:	6	8	9	5	3	5	7	5
1025:	6	7	12	3	12	6	2	14
1033:	7	9	6	11	10	12	6	8
1041:	11	7	5	10	5	3	10	6
1049:	4	6	6	9	9	7	5	7
1057:	4	10	11	3	3	8	7	7
1065:	9	12	4	5	3	2	13	1
1073:	12	6	4	10	8	8	7	6
1081:	13	6	11	8	4	10	7	6
1089:	3	6	6	2	6	8	8	4
1097:	3	5	4	5	4	3	5	7
1105:	6	6	5	5	5	9	6	3
1113:	9	7	12	11	7	10	30	67
1121:	30	13	5	8	6	8	12	5
1129:	9	12	2	8	5	9	6	12
1137:	9	14	6	9	7	7	6	8
1145:	10	6	6	4	4	8	6	5
1153:	9	11	22	9	9	9	10	4
1161:	2	8	5	5	7	10	8	5
1169:	4	4	5	8	14	8	9	6
1177:	10	8	11	7	5	7	7	7
1185:	10	6	7	9	9	7	8	13
1193:	7	5	6	5	10	8	7	9
1201:	10	7	9	8	4	13	8	14
1209:	8	9	7	4	9	8	6	7
1217:	8	5	3	13	5	10	8	6
1225:	5	9	8	14	3	10	7	9
1233:	7	9	15	12	27	22	18	7
1241:	6	7	7	6	4	10	5	5
1249:	10	3	7	12	6	7	3	7
1257:	9	8	4	3	2	5	2	1
1265:	5	10	6	7	8	10	6	9
1273:	3	2	7	4	5	5	12	13
1281:	15	3	1	6	0	6	3	4
1289:	1	6	1	7	10	4	7	6
1297:	2	4	7	4	8	6	6	2
1305:	10	4	5	1	5	0	7	5
1313:	2	3	4	3	3	5	4	6
1321:	2	4	6	1	4	8	1	7
1329:	5	1	3	6	8	2	2	3
1337:	3	0	3	3	6	0	4	3
1345:	1	1	8	5	1	1	2	2
1353:	4	4	3	3	7	2	5	3
1361:	2	3	5	6	4	4	3	3
1369:	3	2	2	4	4	1	2	7
1377:	16	8	5	3	3	2	4	5
1385:	6	4	4	1	3	2	1	3

1393:	1	2	3	3	5	5	3	2
1401:	7	6	4	2	4	5	13	6
1409:	7	2	3	2	1	1	4	2
1417:	0	1	1	1	3	1	1	6
1425:	3	6	6	2	3	2	3	3
1433:	1	2	4	4	4	1	2	3
1441:	5	2	1	0	2	2	2	2
1449:	2	3	2	2	4	4	3	3
1457:	4	20	106	287	223	61	11	3
1465:	2	4	2	2	4	2	1	6
1473:	1	1	3	2	1	2	1	3
1481:	3	1	4	2	0	3	4	2
1489:	2	4	5	2	1	2	3	2
1497:	4	3	3	2	3	4	4	1
1505:	1	3	3	11	5	5	5	3
1513:	2	3	1	2	2	1	2	3
1521:	7	2	4	0	2	1	3	2
1529:	2	2	1	2	0	3	1	0
1537:	2	4	0	1	3	1	3	0
1545:	3	1	0	2	0	1	2	1
1553:	1	1	1	8	3	0	1	4
1561:	1	2	3	1	1	2	0	2
1569:	1	3	2	1	0	2	2	2
1577:	1	0	3	4	1	2	2	2
1585:	2	7	6	3	6	3	7	6
1593:	5	2	5	0	2	3	0	4
1601:	2	4	1	0	0	1	3	3
1609:	2	2	2	6	2	2	1	3
1617:	0	1	1	6	0	1	0	0
1625:	3	4	1	0	4	1	4	2
1633:	0	0	2	2	2	3	1	1
1641:	1	1	3	2	1	1	1	3
1649:	2	0	1	1	0	2	0	1
1657:	0	1	4	4	8	1	2	4
1665:	3	2	1	2	0	2	2	1
1673:	1	1	3	1	1	1	1	3
1681:	1	0	4	2	3	2	1	1
1689:	2	0	0	3	1	2	2	1
1697:	0	0	0	2	5	2	2	2
1705:	0	2	0	0	2	0	0	0
1713:	0	2	0	0	3	1	3	0
1721:	0	0	2	0	2	2	2	8
1729:	9	3	0	0	2	0	1	0
1737:	1	0	1	3	1	5	0	0
1745:	1	2	0	3	1	1	1	2
1753:	2	1	1	2	0	1	3	2
1761:	4	8	18	44	26	3	2	2
1769:	1	1	1	0	1	2	1	0
1777:	0	0	1	1	1	1	3	0
1785:	1	0	1	1	0	1	2	2
1793:	0	0	2	2	3	0	1	1
1801:	0	0	0	1	1	1	1	5
1809:	1	3	0	0	1	1	2	2
1817:	1	3	0	0	1	1	1	0
1825:	0	0	1	0	0	1	0	2
1833:	0	1	1	0	1	1	1	0
1841:	0	1	1	1	2	3	4	5
1849:	5	1	0	1	0	0	0	0
1857:	1	2	0	0	2	0	6	0
1865:	0	0	1	1	0	2	0	1



1873:	0	1	2	4	1	1	2	1
1881:	2	0	2	1	1	1	2	0
1889:	4	3	2	0	1	1	1	2
1897:	0	1	0	0	1	2	2	3
1905:	0	0	2	1	1	1	2	0
1913:	1	3	0	0	1	0	0	4
1921:	0	0	1	2	1	1	0	1
1929:	0	0	1	1	1	1	1	0
1937:	2	1	0	1	0	2	1	2
1945:	2	1	0	0	3	0	1	2
1953:	3	0	0	1	0	2	2	0
1961:	0	3	2	5	1	1	1	2
1969:	0	1	2	0	3	0	2	1
1977:	1	1	1	1	1	0	0	2
1985:	0	3	0	1	3	0	1	0
1993:	0	3	0	1	1	0	1	1
2001:	2	0	1	2	0	1	0	0
2009:	1	1	1	1	1	2	1	0
2017:	0	2	0	1	1	1	2	0
2025:	1	1	2	0	0	0	1	1
2033:	0	0	2	1	0	1	3	0
2041:	0	1	1	1	1	1	0	0
2049:	0	1	2	2	0	0	0	3
2057:	1	1	1	1	0	1	0	0
2065:	3	1	1	1	0	0	1	0
2073:	1	1	1	0	0	1	1	2
2081:	1	1	1	0	1	1	0	0
2089:	0	0	1	0	3	3	2	0
2097:	0	0	1	1	2	3	4	1
2105:	2	0	0	1	0	1	1	2
2113:	1	0	0	2	1	2	0	0
2121:	0	0	1	0	3	1	0	3
2129:	2	3	1	0	1	0	0	2
2137:	1	1	0	0	1	0	0	0
2145:	1	1	2	2	0	0	0	1
2153:	0	0	0	0	1	0	2	0
2161:	4	1	1	0	2	0	0	2
2169:	0	0	1	1	1	1	0	0
2177:	0	0	0	0	2	1	0	2
2185:	0	1	0	3	1	3	1	1
2193:	2	1	2	2	1	0	1	1
2201:	0	10	8	14	4	0	0	4
2209:	1	2	1	0	2	1	0	2
2217:	1	1	0	2	0	1	1	0
2225:	0	0	1	1	0	0	0	0
2233:	0	3	1	1	1	1	0	1
2241:	2	0	2	1	1	0	0	0
2249:	0	2	1	2	0	2	3	0
2257:	0	2	2	0	1	3	1	1
2265:	2	1	2	0	1	1	0	0
2273:	2	0	1	0	0	3	1	2
2281:	1	0	2	0	2	0	2	1
2289:	0	2	2	4	0	1	0	0
2297:	2	0	3	1	0	2	1	0
2305:	0	1	1	0	3	1	0	0
2313:	1	1	2	1	0	1	1	1
2321:	2	0	1	1	0	0	0	1
2329:	3	1	0	0	2	0	0	0
2337:	3	1	3	0	2	1	0	1
2345:	0	1	1	0	1	1	3	3

2353:	1	2	0	2	0	1	1	0
2361:	0	2	0	0	0	0	3	1
2369:	3	0	0	2	3	0	1	0
2377:	0	1	1	1	4	3	3	0
2385:	0	1	1	1	1	0	1	1
2393:	0	1	2	0	2	1	1	1
2401:	0	0	0	0	0	2	0	0
2409:	0	3	0	2	1	1	0	2
2417:	0	1	1	1	1	1	1	0
2425:	0	0	1	1	0	1	1	2
2433:	2	0	0	1	0	2	1	1
2441:	0	2	0	1	2	4	1	4
2449:	0	0	0	0	0	1	1	0
2457:	1	1	0	0	0	0	1	0
2465:	0	0	1	0	0	1	0	0
2473:	2	0	0	3	2	0	3	0
2481:	0	0	0	1	0	0	0	0
2489:	0	1	1	1	0	2	0	1
2497:	0	0	0	0	0	2	0	0
2505:	1	0	0	0	0	1	0	0
2513:	0	0	0	0	0	0	0	0
2521:	0	0	1	0	0	0	0	0
2529:	0	0	0	0	0	0	0	0
2537:	0	0	1	0	2	0	0	0
2545:	0	0	0	0	1	1	0	0
2553:	0	1	0	0	0	0	0	0
2561:	0	0	0	0	1	1	0	0
2569:	0	0	0	0	0	0	0	1
2577:	1	1	0	0	2	0	0	0
2585:	0	1	0	0	0	0	0	0
2593:	0	0	0	0	1	0	0	1
2601:	2	0	0	0	0	0	0	0
2609:	2	0	6	13	25	27	13	1
2617:	1	0	0	1	0	1	0	0
2625:	1	1	1	0	0	1	1	0
2633:	0	2	0	0	0	1	0	0
2641:	0	0	1	0	1	0	0	1
2649:	0	0	1	0	1	0	0	0
2657:	0	1	1	0	0	0	0	1
2665:	0	0	0	0	1	0	0	1
2673:	0	0	0	1	0	0	0	0
2681:	1	1	0	0	0	1	0	1
2689:	0	0	0	0	0	0	0	2
2697:	1	0	0	0	0	0	0	0
2705:	1	0	2	0	2	0	0	0
2713:	0	0	0	2	0	0	1	0
2721:	1	0	1	1	1	0	1	0
2729:	0	0	0	0	0	0	0	0
2737:	0	0	0	0	1	1	0	0
2745:	1	0	0	1	0	0	1	0
2753:	1	1	0	0	0	0	0	1
2761:	0	0	0	1	0	0	0	0
2769:	0	0	0	0	0	0	0	0
2777:	0	0	0	1	0	0	0	0
2785:	0	0	0	3	0	1	2	0
2793:	0	0	2	0	0	0	0	0
2801:	0	1	0	0	0	0	0	0
2809:	0	1	0	0	0	1	1	0
2817:	0	0	0	0	0	1	0	0
2825:	0	0	0	0	0	1	1	0

2833:	0	1	0	1	0	0	0	0
2841:	0	0	0	0	0	0	1	0
2849:	0	1	0	1	0	0	0	0
2857:	1	0	0	1	0	1	1	0
2865:	0	0	0	0	0	0	0	0
2873:	0	0	0	0	2	0	0	0
2881:	0	0	0	0	0	1	0	0
2889:	0	1	1	1	0	0	1	0
2897:	1	0	0	0	1	1	0	0
2905:	0	0	0	0	1	0	0	0
2913:	0	0	0	0	0	0	0	0
2921:	0	0	0	0	0	0	1	0
2929:	0	1	0	1	0	1	0	0
2937:	0	0	1	0	0	0	0	1
2945:	0	0	0	0	1	1	0	0
2953:	0	0	0	0	1	0	0	0
2961:	0	0	0	0	0	0	0	0
2969:	0	0	1	1	0	0	0	0
2977:	0	0	0	1	0	0	0	1
2985:	0	1	1	0	0	1	0	1
2993:	0	0	0	0	0	0	0	0
3001:	0	0	0	0	0	0	1	0
3009:	0	0	0	1	0	0	0	0
3017:	0	0	1	1	0	0	0	1
3025:	0	0	2	0	1	0	0	0
3033:	0	0	0	0	0	0	0	1
3041:	0	0	0	0	0	1	0	0
3049:	0	0	0	1	0	0	1	0
3057:	0	0	0	0	0	1	0	0
3065:	0	0	1	0	0	0	0	0
3073:	0	3	0	0	0	0	0	0
3081:	0	0	0	0	0	0	0	0
3089:	1	0	0	0	0	0	0	0
3097:	0	0	0	0	0	0	0	1
3105:	0	1	0	3	0	0	0	0
3113:	0	0	0	0	0	0	0	0
3121:	0	0	0	0	0	0	1	0
3129:	0	0	1	0	0	0	0	0
3137:	0	0	0	0	0	0	0	0
3145:	0	0	0	0	0	0	1	0
3153:	0	0	0	0	1	0	0	1
3161:	1	0	2	1	1	0	2	1
3169:	0	0	0	0	0	1	2	0
3177:	0	0	0	0	0	0	1	0
3185:	0	0	0	0	0	0	0	0
3193:	1	0	0	0	1	0	1	1
3201:	0	0	0	0	1	0	0	0
3209:	0	0	1	0	0	0	1	0
3217:	1	0	1	0	0	0	1	2
3225:	0	0	0	1	1	0	0	0
3233:	0	0	2	0	0	1	0	0
3241:	0	0	0	0	0	0	0	0
3249:	0	0	0	0	1	0	1	0
3257:	0	0	0	1	0	0	0	0
3265:	0	1	0	0	0	0	0	0
3273:	0	0	0	0	0	0	0	0
3281:	0	0	2	1	0	0	0	0
3289:	0	0	0	0	0	0	2	0
3297:	0	1	1	0	0	0	0	0
3305:	0	0	0	0	0	0	0	1

3313:	0	0	1	0	0	0	0	0
3321:	0	0	0	0	0	1	0	0
3329:	0	0	0	0	0	0	0	0
3337:	0	0	0	1	0	0	1	1
3345:	0	0	0	0	0	0	0	0
3353:	0	0	0	0	0	0	0	0
3361:	1	0	0	0	0	0	1	0
3369:	1	0	1	0	0	1	1	1
3377:	0	0	1	0	0	1	0	0
3385:	0	0	0	0	0	0	0	0
3393:	0	0	0	0	0	0	0	0
3401:	0	0	0	0	1	0	0	0
3409:	0	0	0	1	0	0	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	1	1	0
3433:	0	0	0	0	0	0	0	0
3441:	0	0	0	0	0	0	0	1
3449:	1	0	1	0	0	1	0	0
3457:	0	0	0	1	0	0	0	0
3465:	0	0	1	0	0	0	0	0
3473:	0	0	0	0	0	1	0	0
3481:	0	1	0	0	1	0	0	0
3489:	0	0	1	2	0	0	0	0
3497:	1	0	0	0	0	0	0	0
3505:	0	0	0	0	0	0	1	0
3513:	0	0	0	1	1	0	0	2
3521:	0	0	2	1	1	0	1	0
3529:	0	0	2	0	0	0	0	0
3537:	0	1	0	0	0	0	0	0
3545:	0	0	0	0	0	0	1	0
3553:	0	0	0	0	0	0	0	2
3561:	0	0	0	0	0	0	0	0
3569:	0	0	0	0	0	0	0	0
3577:	0	0	0	0	0	0	0	0
3585:	0	0	0	0	0	1	0	0
3593:	0	0	0	0	0	0	0	0
3601:	0	1	0	2	0	0	0	0
3609:	0	0	0	0	0	0	1	0
3617:	0	0	0	0	0	0	0	0
3625:	1	0	0	1	0	0	0	0
3633:	1	0	0	0	0	0	0	0
3641:	0	0	0	0	0	0	1	0
3649:	0	0	0	0	0	0	0	0
3657:	0	0	0	0	0	0	0	0
3665:	0	0	0	0	1	0	0	1
3673:	0	0	0	0	1	0	0	0
3681:	0	0	1	0	0	0	1	0
3689:	0	0	0	0	0	0	0	0
3697:	0	0	3	0	1	0	0	0
3705:	0	0	1	0	0	0	0	0
3713:	0	0	0	0	0	0	0	0
3721:	0	0	1	0	1	0	0	0
3729:	0	1	0	0	0	0	0	0
3737:	0	0	0	0	0	0	1	0
3745:	0	0	0	0	0	0	0	0
3753:	0	1	1	0	1	0	0	0
3761:	0	0	0	0	0	0	0	0
3769:	0	1	0	0	0	0	0	1
3777:	0	0	0	1	0	0	0	0
3785:	0	0	0	0	1	0	0	0

3793:	0	0	0	1	0	0	0	0
3801:	0	0	0	0	0	0	1	0
3809:	0	0	0	0	0	0	0	0
3817:	0	0	0	0	0	0	1	0
3825:	0	0	0	0	1	0	0	0
3833:	0	0	0	0	1	0	1	1
3841:	0	0	0	1	0	0	0	0
3849:	0	0	0	0	0	0	0	1
3857:	0	0	1	0	0	0	0	0
3865:	0	0	0	0	0	0	0	0
3873:	0	0	0	0	0	0	0	0
3881:	0	0	0	0	0	0	0	0
3889:	0	0	0	0	0	0	0	1
3897:	1	2	0	0	0	0	0	0
3905:	1	0	0	0	0	0	0	0
3913:	1	0	0	0	1	0	0	0
3921:	0	0	0	0	0	0	0	0
3929:	0	0	0	0	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	0	0	0
3953:	0	0	0	0	0	0	0	0
3961:	0	0	0	0	0	0	0	1
3969:	0	0	0	0	0	0	0	0
3977:	0	0	0	0	0	0	0	0
3985:	0	0	0	0	0	0	0	0
3993:	0	1	0	0	0	0	0	1
4001:	0	0	0	0	0	1	0	0
4009:	0	0	0	0	0	0	0	0
4017:	1	0	0	1	0	0	0	0
4025:	0	0	0	0	1	0	0	0
4033:	0	0	0	0	0	1	0	0
4041:	1	0	0	0	0	0	0	0
4049:	0	0	0	0	1	0	0	1
4057:	0	0	0	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	0	0	0	0	0	0	0
4081:	0	0	0	0	0	0	1	0
4089:	0	0	0	1	0	0	0	0

Sample ID : 1109167-15

Acquisition date : 25-OCT-2011 09:57:18

Page : 1

VAX/VMS Peak Search Report Generated 25-OCT-2011 10:58:02.83

Configuration : DKA100: [GAMMA.SCUSR.ARCHIVE] SMP 110916715\_GE4\_GAS1102\_169791.  
 Analyses by : PEAK V16.9 ENBACK V1.6 PEAKEFF V2.2  
 Client ID : VTP-01-31-110928  
 Deposition Date :  
 Sample Date : 28-SEP-2011 00:00:00 Acquisition date : 25-OCT-2011 09:57:18  
 Sample ID : 1109167-15 Sample Quantity : 4.33940E+02 GRAM  
 Sample type : SOLID Sample Geometry : 0  
 Detector name : GE4 Detector Geometry: GAS-1102  
 Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:30.64 0.8%  
 Start channel : 5 End channel : 4096  
 Sensitivity : 2.40000 Gaussian : 15.00000  
 Critical level : Yes

## Post-NID Peak Search Report

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	46.09*	4207	12317	1.94	45.50	43	6	8.9		PB-210
0	53.09*	1050	13336	1.78	52.50	50	6	35.3		
0	61.88*	749	20689	4.78	61.30	58	7	63.9		TH-234
6	69.11	1691	26212	3.47	68.53	64	18	33.1	1.40E+02	
6	76.13	37651	34630	3.56	75.55	64	18	2.2		AM-243
2	83.64*	1651	14644	1.63	83.07	81	11	22.1	2.49E+01	
2	86.96	5722	13152	1.79	86.38	81	11	6.7		NP-237 SN-126 CD-109
2	89.15	2736	17118	2.45	88.57	81	11	17.6		
0	93.50*	480	11888	2.02	92.93	92	6	72.9		
5	138.39	306	9310	2.26	137.84	135	22	95.3	2.51E+00	
5	147.81	562	18689	3.34	147.27	135	22	91.9		
5	153.82	1074	14987	3.35	153.28	135	22	40.0		
0	185.97*	7975	15646	2.22	185.44	181	10	6.3		RA-226
3	235.69	773	7312	2.28	235.19	231	16	37.1	2.91E+00	NB-95M
3	238.50*	601	6104	2.13	238.00	231	16	44.1		PB-212
3	241.80	9779	5742	1.99	241.31	231	16	3.2		RA-224
0	257.31	987	8586	4.88	256.82	252	10	35.8		
0	269.89	707	7194	2.71	269.41	266	8	42.2		
0	275.22	306	4865	1.42	274.74	273	6	73.4		
0	284.19	417	5058	3.85	283.72	281	7	57.4		
0	295.05	19821	6558	2.20	294.58	290	9	2.0		PB-214
0	314.10	208	4252	3.80	313.64	311	7	104.9		
0	323.20	158	2994	1.03	322.74	321	5	105.1		RA-223
0	339.21	321	4000	2.52	338.76	336	7	66.3		
0	351.72*	32582	6477	2.17	351.28	345	12	1.5		PB-214
0	387.60	572	4792	4.12	387.17	383	10	46.0		
0	403.30	358	4402	4.86	402.88	398	9	67.7		RN-219
0	453.75	234	2211	2.71	453.36	451	7	68.1		
0	461.09	256	2159	2.44	460.70	458	7	61.6		
0	478.22	391	3119	2.60	477.84	472	11	56.3		BE-7
0	486.64	203	1651	2.26	486.27	484	6	64.8		
0	510.89*	248	2540	3.58	510.53	505	10	77.4		
0	571.63	132	1170	1.71	571.30	570	6	84.1		
0	580.74	493	1857	2.04	580.41	576	10	33.9		

 AG  
 10/25/11

0308

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	609.09*	22064	1769	2.28	608.77	604	10	1.5		BI-214
0	664.55	857	1479	2.70	664.26	658	11	18.7		
0	702.91	174	1195	2.05	702.64	699	8	70.3		
0	742.45	165	1054	2.53	742.19	739	8	69.9		
0	768.15	1979	1500	2.32	767.91	762	12	9.0		
0	785.70	444	1161	2.36	785.46	781	9	29.2		
0	806.00	492	1075	2.51	805.78	802	9	25.7		
0	838.93	236	1055	2.29	838.73	835	8	49.4		
0	911.67	145	1163	3.03	911.51	907	9	86.2		
0	933.75	999	1012	2.18	933.59	929	9	13.1		
0	964.38	76	720	2.55	964.24	961		6114.7		
0	1051.67	240	1032	6.22	1051.57	1045	14	58.1		
5	1062.70	32	153	2.14	1062.60	1061	15	98.7	1.19E+00	
5	1069.59	129	882	3.94	1069.49	1061	15	94.2		
0	1097.46	106	770	4.44	1097.38	1092		10100.2		
0	1103.95	65	449	2.63	1103.88	1102		6105.8		
0	1120.08	4030	932	2.45	1120.01	1115	12	4.4		BI-214
0	1133.04	169	845	2.28	1132.98	1128	12	70.7		
0	1155.06	518	743	2.44	1155.01	1150	11	22.3		
0	1183.25	152	591	1.47	1183.22	1179	9	60.1		
0	1207.84	216	744	3.98	1207.82	1201	13	54.1		
0	1238.03	1415	650	2.64	1238.02	1233	11	8.8		
0	1252.44	143	676	2.79	1252.44	1246	12	74.8		
0	1280.66	372	614	2.78	1280.67	1275	10	27.0		
0	1310.65	62	369	1.53	1310.67	1306		8110.7		
0	1316.34	57	274	1.18	1316.37	1314	6	94.8		
0	1341.94	120	544	7.67	1341.98	1337	11	77.6		
2	1377.52	997	430	2.55	1377.58	1372	17	9.6	4.14E-01	
2	1384.95	222	407	2.64	1385.01	1372	17	34.7		
2	1401.12	364	462	3.06	1401.19	1395	18	23.9	8.01E-01	
2	1407.76	510	366	2.45	1407.83	1395	18	15.3		
0	1460.74*	199	597	2.66	1460.84	1456	10	48.2		K-40
0	1477.87	60	421	2.94	1477.98	1474		8122.6		
0	1509.01	594	759	2.91	1509.13	1503	14	21.3		
0	1539.05	84	450	2.33	1539.19	1536	7	87.0		
0	1581.98	204	407	3.27	1582.14	1577	11	40.7		
0	1661.02	244	307	2.52	1661.21	1654	14	33.1		
0	1682.64	102	226	3.06	1682.85	1678	13	63.8		
0	1694.13	70	209	2.81	1694.34	1690	12	86.3		
0	1729.62	608	180	2.71	1729.85	1725	12	12.0		
0	1764.32*	3070	202	2.66	1764.57	1758	15	4.1		BI-214
2	1838.14	75	97	3.18	1838.42	1830	24	57.6	1.40E+00	
2	1847.32*	437	91	2.92	1847.61	1830	24	12.4		
0	1872.56	42	147	4.07	1872.86	1865		12119.2		
0	1896.19	44	95	2.69	1896.50	1893	8	81.6		
0	1935.15	60	147	3.49	1935.48	1931	11	82.7		
0	2050.35	118	163	25.80	2050.74	2036	31	66.7		
0	2118.67	189	56	2.74	2119.09	2112	12	21.3		
0	2171.67	33	50	7.31	2172.11	2162		17105.2		
0	2203.80*	818	42	3.22	2204.27	2199	11	7.6		BI-214
0	2256.61	26	25	10.86	2257.10	2246	17	96.4		

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides
0	2293.64	45	22	3.16	2294.14	2289	10	49.7		
0	2321.08	21	6	1.37	2321.60	2317	12	63.9		
0	2377.27	15	2	1.21	2377.81	2374	8	61.8		
0	2447.58	241	0	2.88	2448.16	2442	14	12.9		
0	2614.73	55	2	3.38	2615.39	2611	10	29.0		



Total number of lines in spectrum 90  
Number of unidentified lines 52  
Number of lines tentatively identified by NID 38 42.22%

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
BE-7	53.44D	1.43	1.251E+01	1.785E+01	1.034E+01	57.92	
NB-95M	3.61D	194.	5.230E+00	1.015E+03	0.390E+03	38.40	
AM-243	7380.00Y	1.00	5.833E+01	5.833E+01	0.570E+01	9.76	
Total Activity :			7.607E+01	1.091E+03			

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.796E+01	1.796E+01	0.884E+01	49.24	
PB-210	22.26Y	1.00	1.277E+02	1.280E+02	0.164E+02	12.82	
PB-212	1.41E+10Y	1.00	2.305E+00	2.305E+00	1.043E+00	45.26	
BI-214	1602.00Y	1.00	2.070E+02	2.071E+02	0.121E+02	5.86	
PB-214	1602.00Y	1.00	2.139E+02	2.140E+02	0.174E+02	8.15	
RN-219	3.28E+04Y	1.00	1.538E+01	1.538E+01	1.062E+01	69.02	
RA-223	3.28E+04Y	1.00	9.198E+00	9.198E+00	9.722E+00	105.70	
RA-224	1.41E+10Y	1.00	4.268E+02	4.268E+02	0.451E+02	10.57	
RA-226	1602.00Y	1.00	3.423E+02	3.423E+02	6.274E+02	183.29	
TH-234	4.47E+09Y	1.00	2.079E+01	2.079E+01	1.342E+01	64.51	
Total Activity :			1.383E+03	1.384E+03			

Nuclide Type : FISSION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	1.572E+02	1.638E+02	0.231E+02	14.10	
SN-126	1.00E+05Y	1.00	1.580E+01	1.580E+01	0.202E+01	12.76	
NP-237	2.14E+06Y	1.00	4.635E+01	4.635E+01	0.587E+01	12.66	
Total Activity :			2.194E+02	2.259E+02			

Grand Total Activity : 1.679E+03 2.700E+03

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Nuclide Type: ACTIVATION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
BE-7	477.59	10.42*	5.185E-01	1.251E+01	1.785E+01	57.92	OK
Final Mean for 1 Valid Peaks = 1.785E+01+/- 1.034E+01 ( 57.92%)							
NB-95M	235.69	25.00*	1.023E+00	5.230E+00	1.015E+03	38.40	OK
Final Mean for 1 Valid Peaks = 1.015E+03+/- 3.896E+02 ( 38.40%)							
AM-243	74.67	66.00*	1.692E+00	5.833E+01	5.833E+01	9.76	OK
Final Mean for 1 Valid Peaks = 5.833E+01+/- 5.695E+00 ( 9.76%)							

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
K-40	1460.81	10.67*	1.798E-01	1.796E+01	1.796E+01	49.24	OK
Final Mean for 1 Valid Peaks = 1.796E+01+/- 8.844E+00 ( 49.24%)							
PB-210	46.50	4.05*	1.407E+00	1.277E+02	1.280E+02	12.82	OK
Final Mean for 1 Valid Peaks = 1.280E+02+/- 1.641E+01 ( 12.82%)							
PB-212	238.63	44.60*	1.012E+00	2.305E+00	2.305E+00	45.26	OK
	300.09	3.41	8.241E-01	-----	Line Not Found	-----	Absent
Final Mean for 1 Valid Peaks = 2.305E+00+/- 1.043E+00 ( 45.26%)							
BI-214	609.31	46.30*	4.029E-01	2.046E+02	2.046E+02	11.64	OK
	1120.29	15.10	2.230E-01	2.071E+02	2.071E+02	12.61	OK
	1764.49	15.80	1.582E-01	2.125E+02	2.126E+02	10.40	OK
	2204.22	4.98	1.404E-01	2.024E+02	2.024E+02	12.66	OK
Final Mean for 4 Valid Peaks = 2.071E+02+/- 1.213E+01 ( 5.86%)							
PB-214	295.21	19.19	8.368E-01	2.135E+02	2.136E+02	10.81	OK
	351.92	37.19*	7.067E-01	2.145E+02	2.145E+02	12.43	OK
Final Mean for 2 Valid Peaks = 2.140E+02+/- 1.745E+01 ( 8.15%)							
RN-219	401.80	6.50*	6.189E-01	1.538E+01	1.538E+01	69.02	OK
Final Mean for 1 Valid Peaks = 1.538E+01+/- 1.062E+01 ( 69.02%)							
RA-223	323.87	3.88*	7.663E-01	9.198E+00	9.198E+00	105.70	OK
Final Mean for 1 Valid Peaks = 9.198E+00+/- 9.722E+00 (105.70%)							

Nuclide Type: NATURAL

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
RA-224	240.98	3.95*	1.004E+00	4.268E+02	4.268E+02	10.57	OK

Final Mean for 1 Valid Peaks = 4.268E+02+/- 4.513E+01 ( 10.57%)

RA-226	186.21	3.28*	1.229E+00	3.423E+02	3.423E+02	183.29	OK
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Final Mean for 1 Valid Peaks = 3.423E+02+/- 6.274E+02 (183.29%)

TH-234	63.29	3.80*	1.639E+00	2.079E+01	2.079E+01	64.51	OK
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Final Mean for 1 Valid Peaks = 2.079E+01+/- 1.342E+01 ( 64.51%)

Nuclide Type: FISSION

Nuclide	Energy	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error	Status
CD-109	88.03	3.72*	1.693E+00	1.572E+02	1.638E+02	14.10	OK

Final Mean for 1 Valid Peaks = 1.638E+02+/- 2.310E+01 ( 14.10%)

SN-126	87.57	37.00*	1.693E+00	1.580E+01	1.580E+01	12.76	OK
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Final Mean for 1 Valid Peaks = 1.580E+01+/- 2.016E+00 ( 12.76%)

NP-237	86.50	12.60*	1.695E+00	4.635E+01	4.635E+01	12.66	OK
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Final Mean for 1 Valid Peaks = 4.635E+01+/- 5.868E+00 ( 12.66%)

Flag: "\*" = Keyline

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.785E+01	1.034E+01	9.911E+00	1.286E+00	1.801
K-40	1.796E+01	8.844E+00	9.083E+00	8.538E-01	1.978
NB-95M	1.015E+03	3.896E+02	4.902E+02	4.517E+01	2.070
CD-109	1.638E+02	2.310E+01	1.739E+01	2.041E+00	9.417
SN-126	1.580E+01	2.016E+00	1.678E+00	1.691E-01	9.418
PB-210	1.280E+02	1.641E+01	1.533E+01	1.276E+00	8.351
PB-212	2.305E+00	1.043E+00	1.432E+00	1.322E-01	1.610
BI-214	2.071E+02	1.213E+01	1.566E+00	1.695E-01	132.220
PB-214	2.140E+02	1.745E+01	1.795E+00	2.095E-01	119.192
RN-219	1.538E+01	1.062E+01	1.144E+01	1.495E+00	1.345
RA-223	9.198E+00	9.722E+00	1.739E+01	1.869E+00	0.529
RA-224	4.268E+02	4.513E+01	1.631E+01	1.507E+00	26.172
RA-226	3.423E+02	6.274E+02	1.999E+01	3.662E+01	17.122
TH-234	2.079E+01	1.342E+01	1.827E+01	1.386E+00	1.138
NP-237	4.635E+01	5.868E+00	4.920E+00	4.897E-01	9.421
AM-243	5.833E+01	5.695E+00	1.007E+00	8.690E-02	57.956

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	-1.110E-01		6.142E-01	9.195E-01	8.864E-02	-0.121
AL-26	2.127E-02		3.097E-01	5.438E-01	4.637E-02	0.039
TI-44	1.860E+00	+	6.367E-01	7.334E-01	5.853E-02	2.536
SC-46	-3.107E-01		6.891E-01	1.171E+00	1.541E-01	-0.265
V-48	-1.697E-01		1.719E+00	2.946E+00	3.751E-01	-0.058
CR-51	9.976E+00		1.160E+01	1.340E+01	1.474E+00	0.745
MN-54	7.912E-01		6.157E-01	9.574E-01	1.169E-01	0.826
CO-56	-2.764E-01		7.440E-01	1.117E+00	1.387E-01	-0.247
CO-57	8.901E-02		4.178E-01	6.868E-01	6.330E-02	0.130
CO-58	3.156E-01		7.188E-01	1.106E+00	1.306E-01	0.285
FE-59	2.136E+00		2.197E+00	2.553E+00	3.055E-01	0.836
CO-60	-1.638E-02		5.934E-01	8.962E-01	9.231E-02	-0.018
ZN-65	1.446E+01		2.343E+00	2.976E+00	3.335E-01	4.860
SE-75	2.523E-01		1.104E+00	1.264E+00	1.185E-01	0.200
RB-82	9.146E+00		1.102E+01	1.277E+01	1.430E+00	0.716
RB-83	-1.041E+00		1.223E+00	1.820E+00	3.295E-01	-0.572
KR-85	2.153E+02		1.165E+02	1.695E+02	2.143E+01	1.270
SR-85	1.256E+00		6.795E-01	9.891E-01	1.250E-01	1.270
Y-88	9.919E-01		4.663E-01	8.801E-01	7.428E-02	1.127
NB-93M	2.059E+02		8.605E+01	2.605E+01	1.069E+01	7.904
NB-94	2.294E-01		5.334E-01	9.238E-01	1.186E-01	0.248
NB-95	1.568E+01		2.136E+00	2.234E+00	2.462E-01	7.017
ZR-95	-1.950E-01		1.234E+00	1.873E+00	2.166E-01	-0.104
RU-103	-6.985E-01		7.828E-01	1.228E+00	2.094E-01	-0.569
RU-106	-1.188E+00		4.486E+00	7.183E+00	1.051E+00	-0.165
AG-108M	5.574E-01		4.954E-01	8.681E-01	8.926E-02	0.642
AG-110M	1.901E-01		5.670E-01	8.193E-01	7.683E-02	0.232

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-113	8.719E-01		1.024E+00	1.357E+00	1.791E-01	0.643
TE123M	7.306E-01		6.002E-01	8.805E-01	7.636E-02	0.830
SB-124	3.336E-01		7.393E-01	1.069E+00	1.176E-01	0.312
I-125	-1.422E+01		9.268E+00	1.500E+01	1.595E+00	-0.948
SB-125	2.477E+00		1.680E+00	2.712E+00	3.589E-01	0.913
SB-126	6.725E+00		3.947E+00	6.919E+00	7.085E-01	0.972
SB-127	-2.546E+01		1.772E+02	2.841E+02	2.739E+01	-0.090
I-129	-2.699E-01		9.189E-01	1.525E+00	2.020E-01	-0.177
I-131	4.945E-01		5.314E+00	8.626E+00	1.043E+00	0.057
BA-133	1.942E+01		3.243E+00	1.706E+00	2.640E-01	11.385
CS-134	1.641E+01		2.069E+00	1.503E+00	1.647E-01	10.917
CS-135	1.138E+01		3.131E+00	4.428E+00	4.129E-01	2.570
CS-136	1.990E+00		3.043E+00	4.706E+00	5.770E-01	0.423
CS-137	2.439E+00		6.052E-01	9.745E-01	9.025E-02	2.503
LA-138	7.089E-02		8.376E-01	1.436E+00	1.318E-01	0.049
CE-139	-4.701E-01		5.482E-01	8.882E-01	7.596E-02	-0.529
BA-140	-4.224E+00		8.124E+00	1.276E+01	4.376E+00	-0.331
LA-140	2.793E+00		2.618E+00	4.604E+00	4.157E-01	0.607
CE-141	4.557E+00		1.770E+00	2.329E+00	5.510E-01	1.957
CE-144	-1.308E+00		3.907E+00	5.701E+00	5.161E-01	-0.229
PM-144	2.548E-01		5.532E-01	8.008E-01	7.881E-02	0.318
PM-145	-4.709E+00		3.642E+00	3.169E+00	2.070E+00	-1.486
PM-146	1.869E+00	+	1.299E+00	1.838E+00	2.406E-01	1.017
ND-147	1.671E+01		1.924E+01	3.135E+01	3.891E+00	0.533
EU-152	3.208E+01	+	6.251E+00	9.005E+00	1.023E+00	3.563
GD-153	-2.785E+00		1.611E+00	2.450E+00	2.366E-01	-1.137
EU-154	-3.303E-01		1.704E+00	2.550E+00	2.458E-01	-0.130
EU-155	1.910E+01	+	2.418E+00	2.418E+00	2.406E-01	7.900
EU-156	6.577E+00		1.816E+01	2.784E+01	6.745E+00	0.236
HO-166M	-6.272E-01		9.276E-01	1.386E+00	1.398E-01	-0.453
HF-172	6.935E-01		3.087E+00	5.073E+00	4.644E-01	0.137
LU-172	1.995E+00		1.622E+01	2.465E+01	2.836E+00	0.081
LU-173	9.813E+00		3.126E+00	3.595E+00	3.353E-01	2.730
HF-175	-2.022E-01		9.644E-01	1.087E+00	1.238E-01	-0.186
LU-176	-5.405E-01		4.881E-01	6.890E-01	7.024E-02	-0.785
TA-182	1.059E+02	+	1.334E+01	8.310E+00	9.237E-01	12.742
IR-192	1.172E+00		1.665E+00	1.913E+00	2.492E-01	0.613
HG-203	1.038E+00		1.093E+00	1.266E+00	1.209E-01	0.820
BI-207	5.790E-01		5.283E-01	7.712E-01	9.059E-02	0.751
TL-208	4.338E+00		1.768E+00	2.580E+00	2.957E-01	1.681
BI-210M	9.159E-01		1.257E+00	1.451E+00	1.352E-01	0.631
PB-211	2.965E+01		1.890E+01	2.728E+01	3.568E+00	1.087
BI-212	-7.470E+00		3.819E+00	6.176E+00	6.394E-01	-1.210
RA-225	1.004E+01		5.211E+00	7.730E+00	7.276E-01	1.299
TH-227	1.138E+01	+	4.370E+00	6.109E+00	5.630E-01	1.863
AC-228	3.371E+00	+	2.941E+00	3.603E+00	4.772E-01	0.936
TH-230	4.744E+02	+	1.624E+02	1.870E+02	1.489E+01	2.537
PA-231	2.678E+01		1.970E+01	2.879E+01	2.897E+00	0.930

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-231	2.062E+00		4.475E+00	7.456E+00	1.242E+00	0.277
PA-233	2.640E-02		2.360E+00	3.415E+00	7.915E-01	0.008
PA-234	2.464E-01		1.904E+00	2.793E+00	2.537E-01	0.088
PA-234M	-8.119E+00		5.791E+01	9.912E+01	1.246E+01	-0.082
U-235	1.025E+01		4.000E+00	5.915E+00	1.044E+00	1.732
AM-241	7.691E+00		1.595E+00	1.816E+00	1.325E-01	4.236
CM-243	6.526E+00		4.085E+00	4.755E+00	4.434E-01	1.373

Summary of Nuclide Activity  
Sample ID : 1109167-15

Page : 10  
Acquisition date : 25-OCT-2011 09:57:18

Total number of lines in spectrum 90  
Number of unidentified lines 52  
Number of lines tentatively identified by NID 38 42.22%

Nuclide Type : ACTIVATION

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
BE-7	53.44D	1.43	1.251E+01	1.785E+01	1.034E+01	57.92	
NB-95M	3.61D	194.	5.230E+00	1.015E+03	0.390E+03	38.40	
AM-243	7380.00Y	1.00	5.833E+01	5.833E+01	0.570E+01	9.76	
Total Activity :			7.607E+01	1.091E+03			

Nuclide Type : NATURAL

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.796E+01	1.796E+01	0.884E+01	49.24	
PB-210	22.26Y	1.00	1.277E+02	1.280E+02	0.164E+02	12.82	
PB-212	1.41E+10Y	1.00	2.305E+00	2.305E+00	1.043E+00	45.26	
BI-214	1602.00Y	1.00	2.070E+02	2.071E+02	0.121E+02	5.86	
PB-214	1602.00Y	1.00	2.139E+02	2.140E+02	0.174E+02	8.15	
RN-219	3.28E+04Y	1.00	1.538E+01	1.538E+01	1.062E+01	69.02	
RA-223	3.28E+04Y	1.00	9.198E+00	9.198E+00	9.722E+00	105.70	
RA-224	1.41E+10Y	1.00	4.268E+02	4.268E+02	0.451E+02	10.57	
RA-226	1602.00Y	1.00	3.423E+02	3.423E+02	6.274E+02	183.29	
TH-234	4.47E+09Y	1.00	2.079E+01	2.079E+01	1.342E+01	64.51	
Total Activity :			1.383E+03	1.384E+03			

Nuclide Type : FISSION

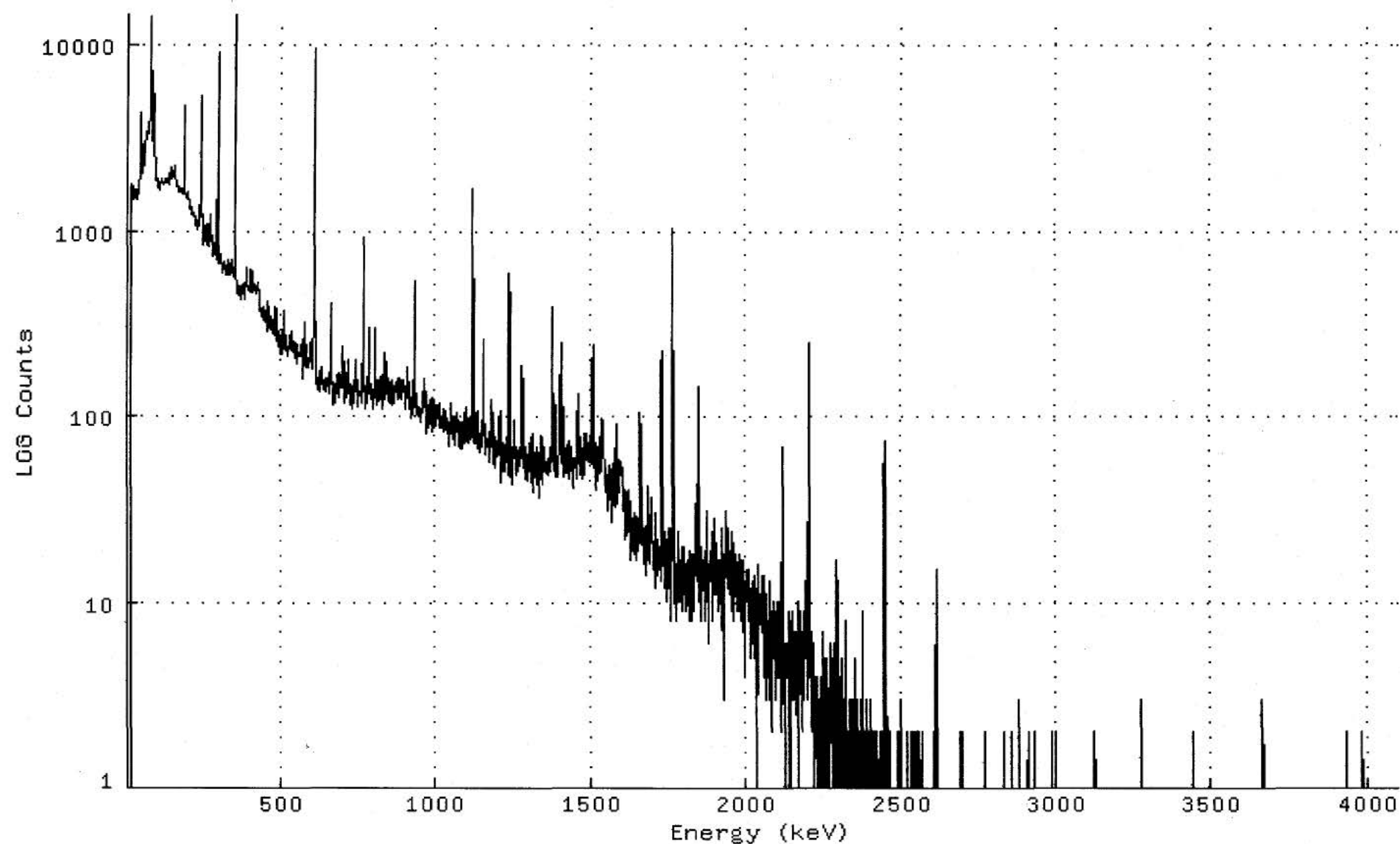
Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/GRAM	Wtd Mean Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CD-109	464.00D	1.04	1.572E+02	1.638E+02	0.231E+02	14.10	
SN-126	1.00E+05Y	1.00	1.580E+01	1.580E+01	0.202E+01	12.76	
NP-237	2.14E+06Y	1.00	4.635E+01	4.635E+01	0.587E+01	12.66	
Total Activity :			2.194E+02	2.259E+02			

Grand Total Activity : 1.679E+03 2.700E+03

Flags: "K" = Keyline not found  
"E" = Manually edited

"M" = Manually accepted  
"A" = Nuclide specific abn. limit

Spectrum : DKA100:[GAMMA.SCUSR.ARCHIVE]SMP\_110916715\_GE4\_GAS1102\_169791.CNF;1  
Title :  
Sample Title: VTP-01-31-110928  
Start Time: 25-OCT-2011 09:57 Sample Time: 28-SEP-2011 00:00 Energy Offset: 6.14527E-01  
Real Time : 0 01:00:30.64 Sample ID : 1109167-15 Energy Slope : 9.99512E-01  
Live Time : 0 01:00:00.00 Sample Type: SOLID Energy Quad : 0.00000E+00





## Channel

1:	0	0	0	0	0	0	0	0
9:	0	0	0	0	0	50	1616	1764
17:	1716	1700	1668	1479	1489	1438	1608	1558
25:	1499	1613	1564	1490	1476	1503	1581	1633
33:	1592	1457	1595	1612	1624	1650	1729	1802
41:	1859	1937	1982	2339	3584	4207	2442	1999
49:	2243	2232	2192	2824	2730	2199	2216	2208
57:	2536	2592	2908	3047	3089	3206	3333	3309
65:	3242	3480	3605	3406	3268	3386	3541	4024
73:	6594	9908	9834	13903	10961	4635	3448	3353
81:	2990	3086	3869	3135	3325	5373	4957	3386
89:	3381	2684	2201	2221	2298	2298	1979	1838
97:	1791	1877	1838	1672	1773	1659	1764	1788
105:	1627	1740	1701	1803	1801	1799	1853	1808
113:	1863	1776	1794	1761	1795	1733	1785	1737
121:	1805	1881	1844	1810	1843	1778	1863	1806
129:	1879	1872	1821	1851	1767	1897	1823	1906
137:	1924	2003	1911	1869	1871	1968	2143	2067
145:	1889	2005	1900	2044	1955	2033	1981	2107
153:	2188	2187	1955	1870	1882	1829	1793	1807
161:	1705	1775	1812	1684	1627	1591	1614	1624
169:	1671	1659	1596	1615	1632	1657	1613	1554
177:	1624	1649	1639	1602	1677	1650	1645	2511
185:	4701	4607	2217	1574	1541	1529	1481	1565
193:	1504	1573	1469	1531	1593	1458	1474	1448
201:	1441	1351	1404	1282	1404	1349	1257	1228
209:	1323	1322	1202	1230	1201	1219	1165	1167
217:	1177	1214	1112	1154	1182	1121	1049	1145
225:	1051	1121	1045	1011	1091	1107	1077	1083
233:	1042	1203	1368	1302	1186	1301	1184	2413
241:	5294	4225	1515	983	942	829	913	884
249:	954	862	878	910	881	945	1039	1031
257:	980	1082	1031	833	841	819	875	826
265:	839	865	810	978	1198	1192	1085	902
273:	871	1003	894	858	759	786	736	723
281:	748	807	839	767	852	750	712	714
289:	792	752	691	846	2462	8204	8926	3051
297:	794	653	721	745	668	658	690	659
305:	659	641	604	657	578	588	620	647
313:	670	617	666	613	627	593	628	565
321:	638	624	618	694	578	616	565	612
329:	662	604	569	605	662	571	576	587
337:	617	685	641	620	600	571	557	631
345:	564	555	603	660	1063	5746	14629	11171
353:	2503	557	503	507	453	459	460	447
361:	473	472	445	466	459	494	422	493
369:	453	447	451	451	478	491	513	463
377:	447	460	451	425	500	482	478	519
385:	508	624	573	606	607	501	472	476
393:	481	492	470	490	488	462	477	494
401:	610	579	506	535	594	503	499	459
409:	485	482	501	487	503	506	490	449
417:	475	487	486	494	498	478	470	487
425:	481	482	522	431	464	426	387	390

433:	364	374	355	339	362	364	363	358
441:	384	351	338	364	362	324	338	326
449:	349	328	319	366	377	413	358	331
457:	281	340	341	336	387	374	338	299
465:	315	287	331	317	345	329	287	280
473:	317	327	326	297	281	307	385	379
481:	338	272	295	273	326	342	375	283
489:	255	283	276	272	236	258	245	250
497:	267	273	212	239	272	269	222	291
505:	216	249	263	264	345	363	349	320
513:	231	238	271	226	245	223	235	215
521:	215	208	227	224	235	239	238	244
529:	239	230	246	261	283	263	231	260
537:	226	255	217	236	237	236	239	251
545:	238	205	220	239	208	220	242	204
553:	220	210	191	204	221	218	209	217
561:	207	216	224	208	216	240	232	237
569:	194	231	233	259	212	209	158	210
577:	204	215	271	321	230	234	239	236
585:	190	184	198	183	193	206	193	195
593:	196	213	198	212	196	197	247	202
601:	194	203	202	177	231	297	1633	6884
609:	9406	4282	620	163	148	183	166	161
617:	163	155	147	142	139	147	160	155
625:	164	159	134	138	153	173	148	166
633:	182	183	159	154	148	139	149	148
641:	156	142	135	139	138	143	139	158
649:	159	147	153	144	145	151	146	147
657:	132	142	147	159	188	188	181	319
665:	404	314	180	114	150	121	135	134
673:	142	146	130	116	139	149	147	148
681:	152	148	165	135	131	153	141	129
689:	169	135	124	158	140	148	151	167
697:	144	155	147	141	162	230	235	164
705:	146	144	152	164	117	147	164	127
713:	125	140	170	133	138	143	187	198
721:	163	131	149	126	144	115	118	144
729:	109	131	126	144	140	122	116	122
737:	146	137	122	135	183	198	170	140
745:	134	137	130	141	154	112	124	138
753:	138	130	130	132	132	127	132	119
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769:	524	207	133	133	140	110	130	145
777:	132	121	133	124	120	118	140	186
785:	288	300	184	139	130	140	134	131
793:	147	125	130	129	111	135	135	139
801:	131	109	145	182	242	297	205	125
809:	144	118	120	114	154	129	138	129
817:	138	119	121	152	163	143	122	146
825:	150	156	129	137	109	144	136	164
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841:	154	137	138	161	135	121	128	119
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857:	142	117	138	156	137	114	133	133
865:	127	133	125	143	118	151	145	144
873:	139	145	143	141	148	123	143	158
881:	138	141	130	157	133	133	125	150
889:	155	121	141	134	149	147	155	139
897:	135	141	142	139	144	145	110	139
905:	145	136	124	128	140	181	153	170

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929:	118	122	120	206	430	529	247	128
937:	111	111	127	130	106	119	102	102
945:	103	111	105	100	108	109	97	100
953:	108	109	92	127	104	122	105	134
961:	109	118	154	159	145	111	127	124
969:	135	115	105	112	80	112	100	90
977:	114	86	113	109	99	91	93	122
985:	110	97	102	102	118	125	82	98
993:	123	108	87	106	88	105	112	88
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1017:	93	100	86	96	95	93	99	88
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1073:	80	86	68	75	79	95	67	78
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1153:	110	190	258	171	93	83	71	62
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1169:	75	68	67	79	81	56	65	77
1177:	91	69	73	68	80	122	88	88
1185:	84	72	68	55	70	59	53	58
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1265:	50	53	65	56	68	67	54	57
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1281:	185	133	79	53	65	77	68	46
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1297:	55	62	51	71	56	62	61	63
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1313:	39	47	55	52	80	50	47	48
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1377:	375	386	219	78	50	53	75	99
1385:	130	102	74	47	53	47	60	57

1393:	56	47	54	56	54	70	72	113
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1409:	152	85	47	52	54	67	58	65
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1473:	54	61	54	60	66	60	74	58
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1769:	14	14	10	10	13	8	15	12
1777:	16	10	12	24	13	14	10	11
1785:	16	13	17	16	10	13	9	20
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1849:	93	31	10	16	8	13	14	20
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1889:	15	22	24	14	8	21	18	28
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1905:	14	21	18	10	10	12	12	17
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1969:	10	10	9	15	14	15	18	13
1977:	11	9	17	12	14	12	16	17
1985:	8	8	11	7	12	12	9	17
1993:	10	9	10	13	4	7	9	11
2001:	10	12	10	12	15	8	8	12
2009:	10	15	12	11	5	12	11	11
2017:	11	7	13	10	6	10	13	7
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2049:	7	12	10	9	11	14	14	6
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2073:	7	4	9	4	3	8	13	6
2081:	2	9	3	8	7	5	6	6
2089:	7	10	7	5	9	3	5	7
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2121:	16	8	1	3	6	5	3	4
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2145:	8	4	9	5	4	8	3	5
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2193:	10	7	9	9	5	3	3	9
2201:	14	52	159	249	217	122	28	5
2209:	3	6	2	7	6	2	3	5
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2225:	2	3	3	1	2	2	2	4
2233:	2	3	3	1	2	0	1	1
2241:	3	3	4	4	3	2	3	0
2249:	4	2	7	3	4	1	1	5
2257:	5	4	3	2	5	0	1	1
2265:	0	3	3	3	2	6	4	2
2273:	3	3	3	0	2	0	2	5
2281:	3	4	3	6	0	5	3	5
2289:	0	3	7	10	8	17	10	5
2297:	6	1	3	3	4	2	2	2
2305:	3	1	3	5	1	2	3	2
2313:	2	2	3	0	1	2	3	2
2321:	8	3	2	1	2	2	1	0
2329:	1	0	3	1	1	3	2	0
2337:	1	0	3	0	0	1	3	1
2345:	3	1	1	1	2	1	1	5

2353:	5	4	1	3	1	3	2	2
2361:	1	2	2	1	2	2	1	3
2369:	2	0	2	1	0	0	1	2
2377:	3	9	0	2	0	1	0	2
2385:	0	1	2	2	3	1	1	0
2393:	2	1	0	0	0	0	3	1
2401:	0	1	2	1	0	2	1	1
2409:	2	1	0	0	1	1	2	1
2417:	1	0	2	2	0	0	1	1
2425:	0	1	0	0	1	2	0	1
2433:	1	2	1	2	0	1	0	1
2441:	0	0	3	2	5	20	42	73
2449:	59	25	6	1	3	2	0	0
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2465:	1	0	1	0	0	0	0	0
2473:	0	0	0	0	0	0	1	0
2481:	1	0	0	0	0	0	1	0
2489:	1	2	1	0	2	0	0	0
2497:	3	0	0	0	0	0	0	1
2505:	1	1	1	1	0	0	0	0
2513:	0	0	1	0	0	0	1	2
2521:	0	1	0	0	1	1	0	0
2529:	2	1	1	0	0	0	0	1
2537:	0	0	2	0	1	0	1	0
2545:	2	1	0	2	0	0	0	0
2553:	0	0	2	1	0	0	1	0
2561:	1	0	0	0	2	0	0	0
2569:	0	0	0	0	0	1	0	0
2577:	0	1	1	1	0	0	0	1
2585:	0	0	0	1	1	0	0	0
2593:	0	0	0	0	0	0	1	1
2601:	1	1	0	2	0	0	0	0
2609:	2	1	0	2	3	12	15	14
2617:	7	3	1	0	0	0	0	0
2625:	1	0	0	0	1	0	0	0
2633:	0	0	0	0	1	1	0	1
2641:	0	0	0	0	0	0	0	0
2649:	0	0	1	0	1	0	0	0
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2665:	1	0	0	0	0	0	0	1
2673:	1	1	0	0	0	0	0	1
2681:	1	0	0	1	0	0	0	1
2689:	0	0	2	0	0	1	1	2
2697:	2	0	0	0	1	1	0	0
2705:	0	0	0	0	1	0	0	1
2713:	1	0	0	0	0	1	0	0
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2729:	0	0	0	1	0	0	0	0
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2745:	0	1	0	0	0	1	0	0
2753:	0	0	1	0	0	0	0	0
2761:	1	0	0	0	1	0	0	1
2769:	2	1	0	0	1	0	1	0
2777:	0	1	1	0	0	0	0	0
2785:	0	0	0	0	0	0	1	0
2793:	0	0	0	0	0	1	0	0
2801:	0	0	0	0	0	0	0	0
2809:	0	0	0	0	0	0	0	0
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2825:	0	0	0	1	0	0	1	0

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2841:	1	0	0	0	0	0	1	0
2849:	0	1	0	0	1	0	2	0
2857:	0	1	0	0	0	0	0	0
2865:	0	0	0	0	0	0	0	1
2873:	0	0	0	0	0	1	0	0
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2889:	0	1	1	1	0	0	1	0
2897:	0	0	0	1	0	0	0	0
2905:	0	0	0	0	2	0	0	0
2913:	0	0	0	0	0	0	0	0
2921:	1	1	1	0	0	0	0	1
2929:	2	0	0	1	0	0	1	1
2937:	0	0	0	1	0	0	0	0
2945:	1	0	0	0	0	0	0	0
2953:	0	0	0	0	0	0	0	1
2961:	0	0	0	0	0	0	0	0
2969:	0	0	0	0	0	0	0	0
2977:	0	0	0	1	0	0	0	2
2985:	1	0	0	0	0	1	0	0
2993:	0	1	0	0	0	0	2	1
3001:	1	0	1	0	0	0	0	0
3009:	0	0	0	0	0	0	1	0
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3033:	0	0	0	0	1	0	0	0
3041:	0	1	1	0	0	0	0	0
3049:	0	0	0	1	0	0	0	1
3057:	0	0	0	0	0	1	0	0
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3073:	0	0	0	0	0	0	0	0
3081:	0	1	0	0	0	0	0	1
3089:	0	0	0	0	0	0	0	0
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3121:	0	2	0	0	0	0	0	0
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3145:	0	0	1	0	0	1	0	0
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3177:	0	0	0	0	0	0	0	0
3185:	0	1	0	0	1	0	0	1
3193:	1	0	0	0	0	0	0	0
3201:	0	0	0	0	0	0	1	0
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3217:	0	0	0	0	1	0	0	0
3225:	0	0	0	0	0	0	0	0
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3265:	0	0	0	0	0	0	0	3
3273:	1	0	0	0	0	0	1	0
3281:	0	0	0	0	0	0	0	0
3289:	0	0	0	0	0	0	0	0
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3345:	0	0	0	0	0	0	0	0
3353:	1	0	1	0	0	0	0	0
3361:	0	0	0	0	1	0	0	1
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3385:	0	0	0	0	0	1	0	0
3393:	1	0	0	0	0	0	0	0
3401:	0	0	0	0	0	0	0	0
3409:	0	0	0	0	0	1	0	0
3417:	0	0	0	0	0	0	0	0
3425:	0	0	0	0	0	0	0	0
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3441:	0	0	0	1	0	0	0	0
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3465:	0	0	0	0	0	0	0	0
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3489:	0	0	0	0	0	0	0	0
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3505:	0	1	0	0	0	0	0	0
3513:	0	0	0	0	0	0	0	0
3521:	0	0	0	0	0	0	0	0
3529:	0	0	0	0	0	0	0	0
3537:	0	0	0	0	0	0	0	0
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3577:	0	0	0	0	0	0	0	0
3585:	0	0	0	0	0	1	0	1
3593:	1	0	0	0	0	0	0	0
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3609:	0	0	0	0	0	0	0	0
3617:	1	0	0	0	0	0	0	1
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3641:	0	0	0	0	1	0	0	0
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3681:	0	0	0	0	0	0	0	0
3689:	1	0	0	0	0	0	0	0
3697:	0	0	0	0	0	0	0	0
3705:	0	0	0	0	0	0	1	1
3713:	0	0	0	0	0	0	0	1
3721:	0	0	0	0	0	1	0	0
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3737:	0	0	0	0	0	0	0	0
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3753:	0	0	0	0	0	0	1	0
3761:	0	0	0	0	0	0	0	0
3769:	0	1	0	0	0	0	0	0
3777:	0	0	0	0	0	0	0	0
3785:	0	0	0	0	0	0	0	0



3793:	0	0	0	0	0	0	1	0
3801:	0	0	0	0	0	0	0	0
3809:	0	0	0	0	0	0	0	0
3817:	0	0	0	1	0	0	0	0
3825:	0	0	0	1	0	0	0	0
3833:	1	0	0	0	0	0	0	0
3841:	0	0	0	0	0	1	0	0
3849:	0	0	0	0	0	0	0	0
3857:	0	0	0	0	0	1	1	0
3865:	0	0	1	0	0	0	0	0
3873:	0	0	0	0	0	0	0	1
3881:	0	0	0	0	0	0	0	0
3889:	0	0	0	0	1	0	0	0
3897:	0	0	0	0	1	0	0	0
3905:	0	0	1	0	0	0	0	1
3913:	1	0	0	0	0	0	0	0
3921:	0	0	0	0	0	0	0	1
3929:	0	0	0	2	0	0	0	0
3937:	0	0	0	0	0	0	0	0
3945:	0	0	0	0	0	1	0	1
3953:	0	0	0	0	0	0	1	0
3961:	0	0	0	0	0	1	0	1
3969:	0	0	0	0	0	1	0	0
3977:	0	1	0	0	1	2	0	0
3985:	0	0	0	0	0	0	0	0
3993:	0	0	0	0	0	0	0	0
4001:	0	0	0	0	0	0	0	0
4009:	0	0	0	0	0	0	0	0
4017:	0	0	0	0	0	0	0	0
4025:	0	0	0	0	0	0	0	1
4033:	1	0	0	1	0	0	0	0
4041:	0	0	0	0	0	0	1	0
4049:	1	1	0	0	0	1	1	0
4057:	0	0	0	0	0	0	0	0
4065:	0	0	0	0	0	0	0	0
4073:	0	1	0	0	0	0	0	0
4081:	0	1	0	0	0	0	0	1
4089:	0	0	1	0	0	0	0	1

QA filename : DKA100:[GAMMA.SCUSR.QA]QCC\_GE4\_GAS1102.QAF;1

Sample ID : Calib Check Sample quantity : 736. GRAM  
Sample date : 1-JAN-2011 00:00:00 Acquisition date : 25-OCT-2011 05:55:57  
Elapsed live time: 0 00:15:00.00 Elapsed real time: 0 00:15:18.32

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*Peak Centroid 59.54 kev	58	61	59	
*Peak Centroid 661.65 kev	660	663	661	
*Peak Centroid 1173.22 kev	1172	1175	1173	
*Peak Centroid 1332.49 kev	1331	1334	1332	
*Peak Centroid 1836.01 kev	1835	1838	1836	
*Peak FWHM Am-241 59.54 kev	0.5	3.0	2.3	
*Peak FWHM Cs-137 661.65 kev	0.5	3.0	2.2	
*Peak FWHM Co-60 1173.22 kev	0.5	3.0	2.4	
*Peak FWHM Co-60 1332.49 kev	0.5	3.0	2.4	
*Peak FWHM Y-88 1836.01 kev	0.5	3.0	2.7	
*DC Activity Am-241 59.54 kev	180	244	211	
*DC Activity Cs-137 661.65 kev	68	92	80	
*DC Activity Co-60 1173.22 kev	112	152	127	
*DC Activity Co-60 1332.49 kev	112	152	131	
*DC Activity Y-88 1836.01 kev	236	319	273	

Flags: "\*" means the out-of-range test is parameter-dependent

Approved by: \_\_\_\_\_ Approval Date: 10/20/11

QA filename : DKA100:[GAMMA.SCUSR.QA]QCC\_GE3\_GAS1102.QAF;1

Sample ID : Calib Check Sample quantity : 736. GRAM  
Sample date : 1-JAN-2011 00:00:00 Acquisition date : 25-OCT-2011 05:35:43  
Elapsed live time: 0 00:15:00.00 Elapsed real time: 0 00:15:59.51

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*Peak Centroid 59.54 kev	58	61	60	
*Peak Centroid 661.65 kev	660	663	662	
*Peak Centroid 1173.22 kev	1172	1175	1174	
*Peak Centroid 1332.49 kev	1331	1334	1333	
*Peak Centroid 1836.01 kev	1835	1838	1837	
*Peak FWHM Am-241 59.54 kev	0.5	3.0	1.5	
*Peak FWHM Cs-137 661.65 kev	0.5	3.0	1.6	
*Peak FWHM Co-60 1173.22 kev	0.5	3.0	2.0	
*Peak FWHM Co-60 1332.49 kev	0.5	3.0	2.2	
*Peak FWHM Y-88 1836.01 kev	0.5	3.0	2.5	
*DC Activity Am-241 59.54 kev	180	244	235	
*DC Activity Cs-137 661.65 kev	68	92	79	
*DC Activity Co-60 1173.22 kev	112	152	133	
*DC Activity Co-60 1332.49 kev	112	152	129	
*DC Activity Y-88 1836.01 kev	236	319	265	

Flags: "\*" means the out-of-range test is parameter-dependent

Approved by: \_\_\_\_\_ Approval Date: 10 / 25 / 11

QA filename : DKA100:[GAMMA.SCUSR.QA]QCC\_GE2\_GAS1102.QAF;1

Sample ID : Calib Check Sample quantity : 736. GRAM  
Sample date : 1-JAN-2011 00:00:00 Acquisition date : 25-OCT-2011 05:14:52  
Elapsed live time: 0 00:15:00.00 Elapsed real time: 0 00:15:16.93

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*Peak Centroid 59.54 kev	58	61	60	
*Peak Centroid 661.65 kev	660	663	661	
*Peak Centroid 1173.22 kev	1172	1175	1173	
*Peak Centroid 1332.49 kev	1331	1334	1332	
*Peak Centroid 1836.01 kev	1835	1838	1835	
*Peak FWHM Am-241 59.54 kev	0.5	3.0	1.7	
*Peak FWHM Cs-137 661.65 kev	0.5	3.0	1.7	
*Peak FWHM Co-60 1173.22 kev	0.5	3.0	2.1	
*Peak FWHM Co-60 1332.49 kev	0.5	3.0	2.2	
*Peak FWHM Y-88 1836.01 kev	0.5	3.0	2.6	
*DC Activity Am-241 59.54 kev	180	244	193	
*DC Activity Cs-137 661.65 kev	68	92	83	
*DC Activity Co-60 1173.22 kev	112	152	134	
*DC Activity Co-60 1332.49 kev	112	152	134	
*DC Activity Y-88 1836.01 kev	236	319	273	

Flags: "\*" means the out-of-range test is parameter-dependent

Approved by: \_\_\_\_\_ Approval Date: 10/25/11

QA filename : DKA100:[GAMMA.SCUSR.QA]QCC\_GE1\_GAS1102.QAF;1

Sample ID : Calib Check Sample quantity : 736. GRAM  
Sample date : 1-JAN-2011 00:00:00 Acquisition date : 25-OCT-2011 06:16:48  
Elapsed live time: 0 00:15:00.00 Elapsed real time: 0 00:15:22.60

Out-of-range Test: BOUNDARY

Parameter Description	Lower	Upper	Value	Flag
*Peak Centroid 59.54 kev	58	61	59	
*Peak Centroid 661.65 kev	660	663	661	
*Peak Centroid 1173.22 kev	1172	1175	1173	
*Peak Centroid 1332.49 kev	1331	1334	1332	
*Peak Centroid 1836.01 kev	1835	1838	1836	
*Peak FWHM Am-241 59.54 kev	0.5	3.0	1.7	
*Peak FWHM Cs-137 661.65 kev	0.5	3.0	1.7	
*Peak FWHM Co-60 1173.22 kev	0.5	3.0	2.0	
*Peak FWHM Co-60 1332.49 kev	0.5	3.0	2.1	
*Peak FWHM Y-88 1836.01 kev	0.5	3.0	2.6	
*DC Activity Am-241 59.54 kev	180	244	178	Below
*DC Activity Cs-137 661.65 kev	68	92	81	
*DC Activity Co-60 1173.22 kev	112	152	131	
*DC Activity Co-60 1332.49 kev	112	152	132	
*DC Activity Y-88 1836.01 kev	236	319	285	

Flags: "\*" means the out-of-range test is parameter-dependent

Approved by: \_\_\_\_\_ Approval Date: 16 / 25 / 11



October 19, 2011

Ms. Kristie Warr  
Weston Solutions, Inc.  
5599 San Felipe, Ste. 700  
Houston, TX 77056

Re: ALS Workorder: 11-09-363  
Project Name: John Bully Mine  
Project Number: TO 0035110603-110929-0002

Dear Ms. Warr:

Twelve soil samples were received from Weston Solutions, Inc. on September 30, 2011. The samples were scheduled for the following analysis:

Metals                      pages 1-426

The results for this analysis are contained in the enclosed report.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental  
Lance Steere  
Senior Project Manager

LRS/eg  
Enclosure (s): Report

ADDRESS 225 Commerce Drive, Fort Collins, Colorado, USA 80524    PHONE +1 970 490 1511    FAX +1 970 490 1522

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Environmental

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

ALS is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

Accreditation Body	License or Certification Number
Washington	C1280
Utah	CO00078
Arizona	AZ0742
Alaska	UST-086
Alaska	CO00078
Florida	E87914
Missouri	175
North Dakota	R-057
New Jersey	CO003
Nevada	CO000782008A
California	06251CA
Kansas	E-10381
Maryland	285
Pennsylvania	68-03116
Texas	T104704241-09-1
Colorado	CO00078
Connecticut	PH-0232
Idaho	CO00078
Tennessee	2976
Kentucky	90137
L-A-B (DoD ELAP/ISO 17025)	L2257

# ALS Environmental -- FC

## Sample Number(s) Cross-Reference Table

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**OrderNum:** 1109363

**Client Name:** Weston Solutions, Inc.

**Client Project Name:** John Bully Mine

**Client Project Number:** TO 0035110603-110929-0002

**Client PO Number:**

---

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
AR-01-31-110928	1109363-1		SOIL	28-Sep-11	13:10
JB-11-31-110928	1109363-2		SOIL	28-Sep-11	8:56
JB-30-31-110928	1109363-3		SOIL	28-Sep-11	9:30
JB-41-31-110928	1109363-4		SOIL	28-Sep-11	9:49
JB-41-32-110928	1109363-5		SOIL	28-Sep-11	9:49
JB-48-31-110928	1109363-6		SOIL	28-Sep-11	9:59
JB-67-31-110928	1109363-7		SOIL	28-Sep-11	10:32
JB-68-31-110928	1109363-8		SOIL	28-Sep-11	10:34
JBBKGD-E-31-110928	1109363-9		SOIL	28-Sep-11	12:40
JBBKGD-S-31-110928	1109363-10		SOIL	28-Sep-11	12:20
JBBKGD-W-31-110928	1109363-11		SOIL	28-Sep-11	12:15
VTP-01-31-110928	1109363-12		SOIL	28-Sep-11	13:00



DateShipped: 9/29/2011  
CarrierName: FedEx  
AirbillNo: 797569637230

### CHAIN OF CUSTODY RECORD

John Bully Mine  
Contact Name: Kristie Warr  
Contact Phone: 713-985-6600

No: T00035110603-110929-0002

Cooler #:  
Lab: ALS  
Lab Phone: 970-490-1511

[illegible]

Special Instructions: Standard TAT, SW846 6010/6020  
SW846 7470/7471

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

[illegible]



## CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Weston  
Project Manager: LSWorkorder No: 1109363  
Initials: COT Date: 9-30-11

1. Does this project require any <b>special handling</b> in addition to standard Paragon procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody <b>seals</b> on <b>shipping containers</b> intact?	<input checked="" type="radio"/> NONE	YES	NO
3. Are Custody seals on <b>sample containers</b> intact?	<input checked="" type="radio"/> NONE	YES	NO
4. Is there a <b>COC (Chain-of-Custody)</b> present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the <b>COC and bottle labels</b> complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the <b>COC in agreement</b> with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were <b>airbills / shipping documents</b> present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	NO
8. Are all <b>aqueous samples</b> requiring preservation preserved correctly? (excluding volatiles)	<input checked="" type="radio"/> N/A	YES	NO
9. Are all aqueous <b>non-preserved samples</b> pH 4-9?	<input checked="" type="radio"/> N/A	YES	NO
10. Is there <b>sufficient sample</b> for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the <b>proper containers</b> for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within <b>holding times</b> for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received <b>intact</b> ? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring <b>no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon)</b> headspace free? <b>Size of bubble:</b> ____ < green pea ____ > green pea	<input checked="" type="radio"/> N/A	YES	NO
15. Do perchlorate LCMS-MS samples <b>have</b> headspace? (at least 1/3 of container required)	<input checked="" type="radio"/> N/A	YES	NO
16. Were samples checked for and free from the presence of <b>residual chlorine</b> ? (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	<input checked="" type="radio"/> N/A	YES	NO
17. Were the samples <b>shipped on ice</b> ?		<input checked="" type="radio"/> YES	NO
18. Were cooler temperatures measured at 0.1-6.0°C? <b>IR gun used*:</b> #2 <input checked="" type="radio"/> #4	RAD ONLY	<input checked="" type="radio"/> YES	NO
Cooler #: <u>1</u>			
Temperature (°C): <u>1.8</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>15</u>			
Background µR/hr reading: <u>12</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES NO / NA (If no, see Form 008.)			

**Additional Information:** PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.If applicable, was the client contacted? YES / ☒ NO / NA Contact: [Signature] Date/Time: \_\_\_\_\_Project Manager Signature / Date: [Signature] 10/2/11

From: (903) 348-3917  
Patrick Buster  
START6 - Weston Solutions, Inc.  
825 E. Santa Fe Ave.

Origin ID: GUPA



Grants, NM 87020

Ship Date: 29SEP11  
ActWgt: 45.0 LB  
CAD: 2557564/NET3180

Delivery Address Bar Code



SHIP TO: (970) 490-1511  
**Lance Steere**  
**ALS Laboratory Group**  
**225 Commerce Drive**

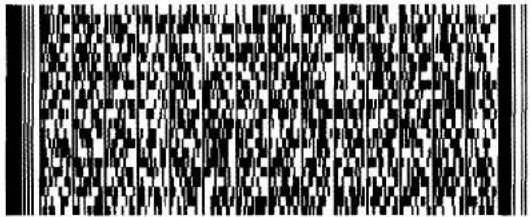
BILL SENDER

Fort Collins, CO 80524

Ref # 20406.016.035.0644.01  
Invoice #  
PO #  
Dept # San Mateo START 6

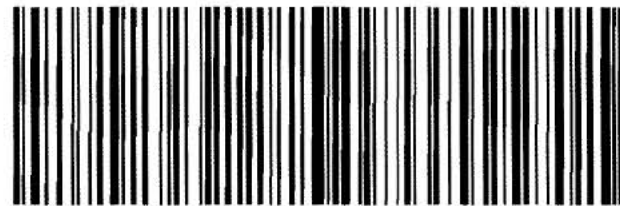
FRI - 30 SEP A2  
FIRST OVERNIGHT

TRK# 7952 3971 3655  
0201



**X1 FTCA**

**80524**  
CO-US  
DEN



50FC042004F5F4

**After printing this label:**

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2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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SANDSTONE



## Metals Case Narrative

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### **Weston Solutions, Inc.**

**John Bully Mine -- TO 0035110603-110929-0002**

Work Order Number: 1109363

1. This report consists of 12 soil samples.
2. The samples were received cool and intact by ALS on 09/30/11.
3. The samples were prepared and analyzed based on SW-846, 3<sup>rd</sup> Edition procedures.

The aliquots used consisted of a fine grained, sandy material. Rocks, chunks, and vegetable material were excluded per project manager direction. The samples were not dried, ground, or sieved.

For analysis by Trace ICP and ICP-MS, the samples were digested following method 3050B and SOP 806 Rev. 15.

For analysis by Cold Vapor AA (CVAA), the samples were digested following method 7471A and SOP 812 Rev. 15.

4. Analysis by Trace ICP followed method 6010B and SOP 834 Rev. 8.

Analysis by ICP-MS followed method 6020A and SOP 827 Rev. 7.

Analysis by CVAA followed method 7471A and SOP 812 Rev. 15.

5. All standards and solutions are NIST traceable and were used within their recommended shelf life.
6. The samples were prepared and analyzed within the established hold times.

All in house quality control procedures were followed, as described below.

7. General quality control procedures.



- A preparation (method) blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- The preparation (method) blank associated with each digestion batch was below the practical quantitation limits for the requested analytes, with the exception of aluminum. The associated samples contained more than ten times the concentration of aluminum detected in the method blank, so no further action was taken.
- All laboratory control sample criteria were met.
- All initial and continuing calibration blanks were below the practical quantitation limits for the requested analytes.
- All initial and continuing calibration verifications were within the acceptance criteria for the requested analytes.
- The high standard readbacks associated with Method 6010B and 6020A analyses were within acceptance criteria.
- The interference check samples associated with Method 6010B were within acceptance criteria.
- The interference check samples associated with Method 6020A were analyzed.

8. Matrix specific quality control procedures.

Sample 1109363-1 was designated as the quality control sample for each analysis.

Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for accuracy were met with the following exceptions:

<u>Analyte</u>	<u>Sample ID</u>
Antimony	1109363-1MS & MSD
Vanadium	1109363-1MS & MSD

The native sample results are flagged for matrix spike failure and an analytical post spike was performed. The results of the spike were acceptable indicating that the matrix was not significantly affecting quantitation of these analytes.

- Matrix spike recoveries could not be evaluated for the following analytes:

<u>Analyte</u>	<u>Sample ID</u>
Aluminum	1109363-1
Calcium	1109363-1
Iron	1109363-1
Manganese	1109363-1
Uranium	1109363-1

The concentrations of these analytes in the native sample were greater than four times the concentration of matrix spike added during the digestion. When sample concentration is that much greater than the spike added, spike recoveries may not be



accurate. The laboratory control samples indicate that the digestion and analyses were in control.

- A sample duplicate and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met with the following exception:

<u>Analyte</u>	<u>Sample ID</u>
Uranium	1109363-1D

The native sample result is flagged for duplicate failure.

- A serial dilution was analyzed with each ICP batch. All acceptance criteria were met with the following exception:

<u>Analyte</u>	<u>Sample ID</u>
Potassium	1109363-1L

The native sample result is flagged for serial dilution failure.

9. Sample 1109363-12 required a dilution to bring iron into the analytical range of the Trace ICP. Accurate quantitation of iron is necessary to correct for spectral interferences on lead, selenium, thallium, and vanadium. The lead, selenium, thallium, and vanadium results were determined from the diluted sample.

It is a standard practice that samples for ICP-MS are analyzed at a 10X dilution. Samples 1109363-1, -2, and -12 required a further dilution to bring uranium into the analytical range of the ICP-MS.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

  
Emily Knodel  
Inorganics Primary Data Reviewer

10-14-11  
Date

  
Bob E. Males  
Inorganics Final Data Reviewer

10-14-11  
Date



### **Inorganic Data Reporting Qualifiers**

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Result qualifier -- If the analyte was analyzed for but not detected a "U" is entered.
- QC qualifier -- Specified entries and their meanings are as follows:
  - E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
  - M - Duplicate injection precision was not met.
  - N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
  - Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
  - \* - Duplicate analysis (relative percent difference) not within control limits.
  - S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.



## Chain of Custody



# ALS Environmental -- FC

## Sample Number(s) Cross-Reference Table

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**OrderNum:** 1109363

**Client Name:** Weston Solutions, Inc.

**Client Project Name:** John Bully Mine

**Client Project Number:** TO 0035110603-110929-0002

**Client PO Number:**

---

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
AR-01-31-110928	1109363-1		SOIL	28-Sep-11	13:10
JB-11-31-110928	1109363-2		SOIL	28-Sep-11	8:56
JB-30-31-110928	1109363-3		SOIL	28-Sep-11	9:30
JB-41-31-110928	1109363-4		SOIL	28-Sep-11	9:49
JB-41-32-110928	1109363-5		SOIL	28-Sep-11	9:49
JB-48-31-110928	1109363-6		SOIL	28-Sep-11	9:59
JB-67-31-110928	1109363-7		SOIL	28-Sep-11	10:32
JB-68-31-110928	1109363-8		SOIL	28-Sep-11	10:34
JBBKGD-E-31-110928	1109363-9		SOIL	28-Sep-11	12:40
JBBKGD-S-31-110928	1109363-10		SOIL	28-Sep-11	12:20
JBBKGD-W-31-110928	1109363-11		SOIL	28-Sep-11	12:15
VTP-01-31-110928	1109363-12		SOIL	28-Sep-11	13:00

1109363

## USEPA

Date Shipped: 9/29/2011

Carrier Name: FedEx

Airbill No: 797569637230

## CHAIN OF CUSTODY RECORD

John Bully Mine

Contact Name: Kristie Warr

Contact Phone: 713-985-6600

No: TO0035110603-110929-0002

Cooler #:

Lab: ALS

Lab Phone: 970-490-1511

Lab #	Sample #	Analyses	Collected	Sample Time	Preservative	Sample Remarks	Samp_Concentration
1	AR-01-31-110928	Metals, Mercury, Molybdenum, Tin, Total Uranium	9/28/2011	13:10	Ice	Crush	396,482 cpm
2	JB-11-31-110928	Metals, Mercury, Molybdenum, Tin, Total Uranium	9/28/2011	8:56	Ice	Crush	62,653 cpm
3	JB-30-31-110928	Metals, Mercury, Molybdenum, Tin, Total Uranium	9/28/2011	9:30	Ice	Crush	66,720 cpm
4	JB-41-31-110928	Metals, Mercury, Molybdenum, Tin, Total Uranium	9/28/2011	9:49	Ice	Crush	108,359 cpm
5	JB-41-32-110928	Metals, Mercury, Molybdenum, Tin, Total Uranium	9/28/2011	9:49	Ice	Crush	108,359 cpm
6	JB-48-31-110928	Metals, Mercury, Molybdenum, Tin, Total Uranium	9/28/2011	9:59	Ice	Crush	74,382 cpm
7	JB-67-31-110928	Metals, Mercury, Molybdenum, Tin, Total Uranium	9/28/2011	10:32	Ice	Crush	76,808 cpm
8	JB-68-31-110928	Metals, Mercury, Molybdenum, Tin, Total Uranium	9/28/2011	10:34	Ice	Crush	85,903 cpm
9	JBBKGD-E-31-110928	Metals, Mercury, Molybdenum, Tin, Total Uranium	9/28/2011	12:40	Ice	Crush	22,529 cpm
10	JBBKGD-S-31-110928	Metals, Mercury, Molybdenum, Tin, Total Uranium	9/28/2011	12:20	Ice	Crush	18,893 cpm
11	JBBKGD-W-31-110928	Metals, Mercury, Molybdenum, Tin, Total Uranium	9/28/2011	12:15	Ice	Crush	19,292 cpm
12	VTP-01-31-110928	Metals, Mercury, Molybdenum, Tin, Total Uranium	9/28/2011	13:00	Ice	Crush	276,280 cpm

Special Instructions: Standard TAT, SW846 6010/6020  
SW846 7470/7471

SAMPLES TRANSFERRED FROM  
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
12 Samples	TJB	9/29/11	C Jumble	9-30-11	0745						



## CONDITION OF SAMPLE UPON RECEIPT FORM

Client: WestonWorkorder No: 1109363Project Manager: LSInitials: COT Date: 9-30-11

1. Does this project require any <b>special handling</b> in addition to standard Paragon procedures?	YES	<input checked="" type="radio"/> NO
2. Are custody seals on <b>shipping containers</b> intact?	<input checked="" type="radio"/> NONE	YES NO
3. Are Custody seals on <b>sample containers</b> intact?	<input checked="" type="radio"/> NONE	YES NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?	<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible?	<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)	<input checked="" type="radio"/> YES	NO
7. Were <b>airbills / shipping documents</b> present and/or removable?	DROP OFF <input checked="" type="radio"/> YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	<input checked="" type="radio"/> N/A	YES NO
9. Are all aqueous <b>non-preserved</b> samples pH 4-9?	<input checked="" type="radio"/> N/A	YES NO
10. Is there <b>sufficient sample</b> for the requested analyses?	<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the <b>proper containers</b> for the requested analyses?	<input checked="" type="radio"/> YES	NO
12. Are all samples within <b>holding times</b> for the requested analyses?	<input checked="" type="radio"/> YES	NO
13. Were all sample containers received <b>intact</b> ? (not broken or leaking, etc.)	<input checked="" type="radio"/> YES	NO
14. Are all samples requiring <b>no headspace</b> (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: _____ < green pea _____ > green pea	<input checked="" type="radio"/> N/A	YES NO
15. Do perchlorate LCMS-MS samples <b>have</b> headspace? (at least 1/3 of container required)	<input checked="" type="radio"/> N/A	YES NO
16. Were samples checked for and free from the presence of <b>residual chlorine</b> ? (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	<input checked="" type="radio"/> N/A	YES NO
17. Were the samples <b>shipped on ice</b> ?	<input checked="" type="radio"/> YES	NO
18. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 <input checked="" type="radio"/> #4 RAD ONLY <input checked="" type="radio"/>	<input checked="" type="radio"/> YES	NO
Cooler #: <u>1</u>		
Temperature (°C): <u>1.8</u>		
No. of custody seals on cooler: <u>0</u>		
DOT Survey Acceptance Information	External µR/hr reading: <u>15</u>	
	Background µR/hr reading: <u>12</u>	
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES <input type="radio"/> NO <input type="radio"/> NA (If no, see Form 008.)		

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / ☒ NO / NA Contact: 10/3/11

Date/Time: \_\_\_\_\_

Project Manager Signature / Date: 10/3/11

1709363

Page 1 of 1

From: (903) 348-3917  
Patrick Buster  
START6 - Weston Solutions, Inc.  
825 E. Santa Fe Ave.

Origin ID: GUPA

FedEx  
Express

J11201106050225

Grants, NM 87020

Ship Date: 29SEP11  
ActWgt: 45.0 LB  
CAD: 2557564/NET3180

Delivery Address Bar Code



SHIP TO: (970) 490-1511

BILL SENDER

Lance Steere  
ALS Laboratory Group  
225 Commerce Drive

Fort Collins, CO 80524

Ref # 20406.016.035.0644.01  
Invoice #  
PO #  
Dept # San Mateo START 6

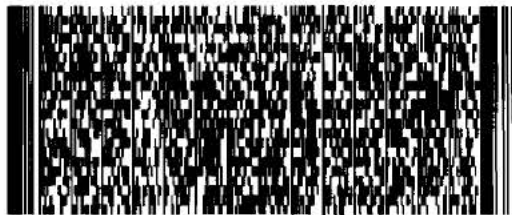
150-

1.80

FRI - 30 SEP A2  
FIRST OVERNIGHT

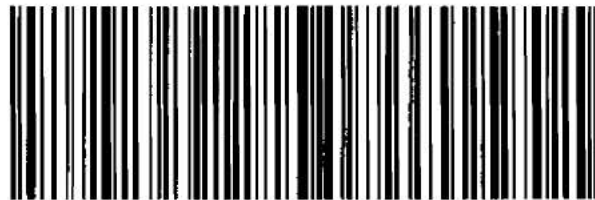
TRK# 7952 3971 3655

8281



X1 FTCA

80524  
CO-US  
DEN



90F201206.F5F4

**After printing this label:**

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

**Warning:** Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number

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SANDSTONE



## Sample Results

# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

Client/Project ID: John Bully Mine TO 0035110603-110929-0002

Field ID: AR-01-31-110928

Lab ID: 1109363-1

Sample Matrix: SOIL

% Moisture: 5.3

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.004 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	9500	21		
7440-36-0	ANTIMONY	1	2.1	2.1	U	N
7440-38-2	ARSENIC	1	19	1.1		
7440-39-3	BARIUM	1	130	11		
7440-41-7	BERYLLIUM	1	0.92	0.53		
7440-43-9	CADMIUM	1	0.53	0.53	U	
7440-70-2	CALCIUM	1	39000	110		
7440-47-3	CHROMIUM	1	7.9	1.1		
7440-48-4	COBALT	1	6.6	1.1		
7440-50-8	COPPER	1	21	1.1		
7439-89-6	IRON	1	19000	11		
7439-92-1	LEAD	1	23	0.32		
7439-95-4	MAGNESIUM	1	4600	110		
7439-96-5	MANGANESE	1	320	1.1		
7439-98-7	MOLYBDENUM	1	15	1.1		
7440-02-0	NICKEL	1	12	2.1		
7440-09-7	POTASSIUM	1	3200	110		E
7782-49-2	SELENIUM	1	15	0.53		
7440-22-4	SILVER	1	1.1	1.1	U	
7440-23-5	SODIUM	1	170	110		
7440-28-0	THALLIUM	1	1.1	1.1	U	
7440-31-5	TIN	1	5.3	5.3	U	
7440-62-2	VANADIUM	1	93	1.1		N
7440-66-6	ZINC	1	51	2.1		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

ALS Environmental -- FC

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LIMS Version: 6.536

# Total ICP Metals

## Method SW6010B

### Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

Client/Project ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-11-31-110928

Lab ID: 1109363-2

Sample Matrix: SOIL

% Moisture: 0.9

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.009 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2200	20		
7440-36-0	ANTIMONY	1	2	2	U	
7440-38-2	ARSENIC	1	5.3	1		
7440-39-3	BARIUM	1	38	10		
7440-41-7	BERYLLIUM	1	0.5	0.5	U	
7440-43-9	CADMIUM	1	0.5	0.5	U	
7440-70-2	CALCIUM	1	8700	100		
7440-47-3	CHROMIUM	1	2.1	1		
7440-48-4	COBALT	1	2.6	1		
7440-50-8	COPPER	1	4.2	1		
7439-89-6	IRON	1	9300	10		
7439-92-1	LEAD	1	8.9	0.3		
7439-95-4	MAGNESIUM	1	1700	100		
7439-96-5	MANGANESE	1	140	1		
7439-98-7	MOLYBDENUM	1	4.8	1		
7440-02-0	NICKEL	1	3.5	2		
7440-09-7	POTASSIUM	1	1100	100		
7782-49-2	SELENIUM	1	2.6	0.5		
7440-22-4	SILVER	1	1	1	U	
7440-23-5	SODIUM	1	100	100	U	
7440-28-0	THALLIUM	1	1	1	U	
7440-31-5	TIN	1	5	5	U	
7440-62-2	VANADIUM	1	16	1		
7440-66-6	ZINC	1	23	2		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

ALS Environmental -- FC

LIMS Version: 6.536

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-30-31-110928

Lab ID: 1109363-3

Sample Matrix: SOIL

% Moisture: 0.9

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.032 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2600	20		
7440-36-0	ANTIMONY	1	2	2	U	
7440-38-2	ARSENIC	1	3.5	0.98		
7440-39-3	BARIUM	1	49	9.8		
7440-41-7	BERYLLIUM	1	0.49	0.49	U	
7440-43-9	CADMIUM	1	0.49	0.49	U	
7440-70-2	CALCIUM	1	7700	98		
7440-47-3	CHROMIUM	1	2.5	0.98		
7440-48-4	COBALT	1	3.3	0.98		
7440-50-8	COPPER	1	4.4	0.98		
7439-89-6	IRON	1	9900	9.8		
7439-92-1	LEAD	1	6.4	0.29		
7439-95-4	MAGNESIUM	1	2500	98		
7439-96-5	MANGANESE	1	150	0.98		
7439-98-7	MOLYBDENUM	1	0.98	0.98	U	
7440-02-0	NICKEL	1	4.2	2		
7440-09-7	POTASSIUM	1	1100	98		
7782-49-2	SELENIUM	1	0.88	0.49		
7440-22-4	SILVER	1	0.98	0.98	U	
7440-23-5	SODIUM	1	98	98	U	
7440-28-0	THALLIUM	1	0.98	0.98	U	
7440-31-5	TIN	1	4.9	4.9	U	
7440-62-2	VANADIUM	1	9.1	0.98		
7440-66-6	ZINC	1	24	2		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

Client/Project ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-41-31-110928

Lab ID: 1109363-4

Sample Matrix: SOIL

% Moisture: 1.1

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.014 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2700	20		
7440-36-0	ANTIMONY	1	2	2	U	
7440-38-2	ARSENIC	1	4.2	1		
7440-39-3	BARIUM	1	43	10		
7440-41-7	BERYLLIUM	1	0.5	0.5	U	
7440-43-9	CADMIUM	1	0.5	0.5	U	
7440-70-2	CALCIUM	1	7400	100		
7440-47-3	CHROMIUM	1	2.7	1		
7440-48-4	COBALT	1	3.8	1		
7440-50-8	COPPER	1	5.2	1		
7439-89-6	IRON	1	12000	10		
7439-92-1	LEAD	1	6.8	0.3		
7439-95-4	MAGNESIUM	1	2200	100		
7439-96-5	MANGANESE	1	160	1		
7439-98-7	MOLYBDENUM	1	1	1	U	
7440-02-0	NICKEL	1	4.8	2		
7440-09-7	POTASSIUM	1	820	100		
7782-49-2	SELENIUM	1	0.5	0.5	U	
7440-22-4	SILVER	1	1	1	U	
7440-23-5	SODIUM	1	100	100	U	
7440-28-0	THALLIUM	1	1	1	U	
7440-31-5	TIN	1	5	5	U	
7440-62-2	VANADIUM	1	10	1		
7440-66-6	ZINC	1	28	2		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

ALS Environmental -- FC

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LIMS Version: 6.536

# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-41-32-110928

Lab ID: 1109363-5

Sample Matrix: SOIL

% Moisture: 1.1

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.037 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2500	19		
7440-36-0	ANTIMONY	1	1.9	1.9	U	
7440-38-2	ARSENIC	1	4	0.97		
7440-39-3	BARIUM	1	42	9.7		
7440-41-7	BERYLLIUM	1	0.49	0.49	U	
7440-43-9	CADMIUM	1	0.49	0.49	U	
7440-70-2	CALCIUM	1	6800	97		
7440-47-3	CHROMIUM	1	2.5	0.97		
7440-48-4	COBALT	1	3.6	0.97		
7440-50-8	COPPER	1	4.6	0.97		
7439-89-6	IRON	1	10000	9.7		
7439-92-1	LEAD	1	6.1	0.29		
7439-95-4	MAGNESIUM	1	2100	97		
7439-96-5	MANGANESE	1	140	0.97		
7439-98-7	MOLYBDENUM	1	0.97	0.97	U	
7440-02-0	NICKEL	1	4.5	1.9		
7440-09-7	POTASSIUM	1	760	97		
7782-49-2	SELENIUM	1	0.49	0.49	U	
7440-22-4	SILVER	1	0.97	0.97	U	
7440-23-5	SODIUM	1	97	97	U	
7440-28-0	THALLIUM	1	0.97	0.97	U	
7440-31-5	TIN	1	4.9	4.9	U	
7440-62-2	VANADIUM	1	8.6	0.97		
7440-66-6	ZINC	1	25	1.9		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

ALS Environmental -- FC

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LIMS Version: 6.536

# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-48-31-110928

Lab ID: 1109363-6

Sample Matrix: SOIL

% Moisture: 1.0

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.014 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2800	20		
7440-36-0	ANTIMONY	1	2	2	U	
7440-38-2	ARSENIC	1	3.9	1		
7440-39-3	BARIUM	1	51	10		
7440-41-7	BERYLLIUM	1	0.5	0.5	U	
7440-43-9	CADMIUM	1	0.5	0.5	U	
7440-70-2	CALCIUM	1	8600	100		
7440-47-3	CHROMIUM	1	2.7	1		
7440-48-4	COBALT	1	3	1		
7440-50-8	COPPER	1	5.1	1		
7439-89-6	IRON	1	10000	10		
7439-92-1	LEAD	1	6.5	0.3		
7439-95-4	MAGNESIUM	1	2600	100		
7439-96-5	MANGANESE	1	140	1		
7439-98-7	MOLYBDENUM	1	1	1	U	
7440-02-0	NICKEL	1	4.6	2		
7440-09-7	POTASSIUM	1	1400	100		
7782-49-2	SELENIUM	1	0.89	0.5		
7440-22-4	SILVER	1	1	1	U	
7440-23-5	SODIUM	1	100	100	U	
7440-28-0	THALLIUM	1	1	1	U	
7440-31-5	TIN	1	5	5	U	
7440-62-2	VANADIUM	1	9.5	1		
7440-66-6	ZINC	1	26	2		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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LIMS Version: 6.536

# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-67-31-110928

Lab ID: 1109363-7

Sample Matrix: SOIL

% Moisture: 1.3

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP 11 1007-4

QCBatchID: IP 11 1007-4-5

Run ID: IT 11 1010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.027 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2800	20		
7440-36-0	ANTIMONY	1	2	2	U	
7440-38-2	ARSENIC	1	4.2	0.99		
7440-39-3	BARIUM	1	55	9.9		
7440-41-7	BERYLLIUM	1	0.49	0.49	U	
7440-43-9	CADMIUM	1	0.49	0.49	U	
7440-70-2	CALCIUM	1	8600	99		
7440-47-3	CHROMIUM	1	2.7	0.99		
7440-48-4	COBALT	1	3.9	0.99		
7440-50-8	COPPER	1	5.1	0.99		
7439-89-6	IRON	1	11000	9.9		
7439-92-1	LEAD	1	6.7	0.3		
7439-95-4	MAGNESIUM	1	2500	99		
7439-96-5	MANGANESE	1	140	0.99		
7439-98-7	MOLYBDENUM	1	0.99	0.99	U	
7440-02-0	NICKEL	1	5	2		
7440-09-7	POTASSIUM	1	620	99		
7782-49-2	SELENIUM	1	0.62	0.49		
7440-22-4	SILVER	1	0.99	0.99	U	
7440-23-5	SODIUM	1	99	99	U	
7440-28-0	THALLIUM	1	0.99	0.99	U	
7440-31-5	TIN	1	4.9	4.9	U	
7440-62-2	VANADIUM	1	10	0.99		
7440-66-6	ZINC	1	27	2		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-68-31-110928

Lab ID: 1109363-8

Sample Matrix: SOIL

% Moisture: 1.1

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.029 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2500	20		
7440-36-0	ANTIMONY	1	2	2	U	
7440-38-2	ARSENIC	1	5.1	0.98		
7440-39-3	BARIUM	1	61	9.8		
7440-41-7	BERYLLIUM	1	0.49	0.49	U	
7440-43-9	CADMIUM	1	0.49	0.49	U	
7440-70-2	CALCIUM	1	8700	98		
7440-47-3	CHROMIUM	1	2.3	0.98		
7440-48-4	COBALT	1	3.1	0.98		
7440-50-8	COPPER	1	4.4	0.98		
7439-89-6	IRON	1	10000	9.8		
7439-92-1	LEAD	1	6.3	0.29		
7439-95-4	MAGNESIUM	1	2000	98		
7439-96-5	MANGANESE	1	160	0.98		
7439-98-7	MOLYBDENUM	1	5	0.98		
7440-02-0	NICKEL	1	4.4	2		
7440-09-7	POTASSIUM	1	570	98		
7782-49-2	SELENIUM	1	2.9	0.49		
7440-22-4	SILVER	1	0.98	0.98	U	
7440-23-5	SODIUM	1	98	98	U	
7440-28-0	THALLIUM	1	0.98	0.98	U	
7440-31-5	TIN	1	4.9	4.9	U	
7440-62-2	VANADIUM	1	13	0.98		
7440-66-6	ZINC	1	24	2		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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LIMS Version: 6.536

# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JBBKGD-E-31-110928

Lab ID: 1109363-9

Sample Matrix: SOIL

% Moisture: 1.5

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.023 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	3800	20		
7440-36-0	ANTIMONY	1	2	2	U	
7440-38-2	ARSENIC	1	3.2	0.99		
7440-39-3	BARIUM	1	70	9.9		
7440-41-7	BERYLLIUM	1	0.5	0.5	U	
7440-43-9	CADMIUM	1	0.5	0.5	U	
7440-70-2	CALCIUM	1	3500	99		
7440-47-3	CHROMIUM	1	3.5	0.99		
7440-48-4	COBALT	1	2.7	0.99		
7440-50-8	COPPER	1	5.5	0.99		
7439-89-6	IRON	1	9400	9.9		
7439-92-1	LEAD	1	6.6	0.3		
7439-95-4	MAGNESIUM	1	1800	99		
7439-96-5	MANGANESE	1	120	0.99		
7439-98-7	MOLYBDENUM	1	0.99	0.99	U	
7440-02-0	NICKEL	1	5	2		
7440-09-7	POTASSIUM	1	1100	99		
7782-49-2	SELENIUM	1	0.5	0.5	U	
7440-22-4	SILVER	1	0.99	0.99	U	
7440-23-5	SODIUM	1	99	99	U	
7440-28-0	THALLIUM	1	0.99	0.99	U	
7440-31-5	TIN	1	5	5	U	
7440-62-2	VANADIUM	1	9.6	0.99		
7440-66-6	ZINC	1	22	2		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JBBKGD-S-31-110928

Lab ID: 1109363-10

Sample Matrix: SOIL

% Moisture: 1.0

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.041 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2900	19		
7440-36-0	ANTIMONY	1	1.9	1.9	U	
7440-38-2	ARSENIC	1	3.5	0.97		
7440-39-3	BARIUM	1	58	9.7		
7440-41-7	BERYLLIUM	1	0.49	0.49	U	
7440-43-9	CADMIUM	1	0.49	0.49	U	
7440-70-2	CALCIUM	1	7300	97		
7440-47-3	CHROMIUM	1	2.8	0.97		
7440-48-4	COBALT	1	3	0.97		
7440-50-8	COPPER	1	4.8	0.97		
7439-89-6	IRON	1	9400	9.7		
7439-92-1	LEAD	1	6.3	0.29		
7439-95-4	MAGNESIUM	1	2500	97		
7439-96-5	MANGANESE	1	130	0.97		
7439-98-7	MOLYBDENUM	1	0.97	0.97	U	
7440-02-0	NICKEL	1	4.5	1.9		
7440-09-7	POTASSIUM	1	1800	97		
7782-49-2	SELENIUM	1	0.49	0.49	U	
7440-22-4	SILVER	1	0.97	0.97	U	
7440-23-5	SODIUM	1	97	97	U	
7440-28-0	THALLIUM	1	0.97	0.97	U	
7440-31-5	TIN	1	4.9	4.9	U	
7440-62-2	VANADIUM	1	8.6	0.97		
7440-66-6	ZINC	1	24	1.9		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JBBKGD-W-31-110928

Lab ID: 1109363-11

Sample Matrix: SOIL

% Moisture: 0.7

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.034 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2100	19		
7440-36-0	ANTIMONY	1	1.9	1.9	U	
7440-38-2	ARSENIC	1	3	0.97		
7440-39-3	BARIUM	1	42	9.7		
7440-41-7	BERYLLIUM	1	0.49	0.49	U	
7440-43-9	CADMIUM	1	0.49	0.49	U	
7440-70-2	CALCIUM	1	5800	97		
7440-47-3	CHROMIUM	1	2.1	0.97		
7440-48-4	COBALT	1	2.8	0.97		
7440-50-8	COPPER	1	4.2	0.97		
7439-89-6	IRON	1	9200	9.7		
7439-92-1	LEAD	1	5.5	0.29		
7439-95-4	MAGNESIUM	1	1900	97		
7439-96-5	MANGANESE	1	130	0.97		
7439-98-7	MOLYBDENUM	1	0.97	0.97	U	
7440-02-0	NICKEL	1	3.7	1.9		
7440-09-7	POTASSIUM	1	890	97		
7782-49-2	SELENIUM	1	0.49	0.49	U	
7440-22-4	SILVER	1	0.97	0.97	U	
7440-23-5	SODIUM	1	97	97	U	
7440-28-0	THALLIUM	1	0.97	0.97	U	
7440-31-5	TIN	1	4.9	4.9	U	
7440-62-2	VANADIUM	1	8.3	0.97		
7440-66-6	ZINC	1	24	1.9		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: VTP-01-31-110928

Lab ID: 1109363-12

Sample Matrix: SOIL

% Moisture: 4.0

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.001 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	8700	21		
7440-36-0	ANTIMONY	1	2.1	2.1	U	
7440-38-2	ARSENIC	1	15	1		
7440-39-3	BARIUM	1	110	10		
7440-41-7	BERYLLIUM	1	1.1	0.52		
7440-43-9	CADMIUM	1	0.52	0.52	U	
7440-70-2	CALCIUM	1	18000	100		
7440-47-3	CHROMIUM	1	8.2	1		
7440-48-4	COBALT	1	8	1		
7440-50-8	COPPER	1	39	1		
7439-89-6	IRON	5	23000	52		
7439-92-1	LEAD	5	30	1.6		
7439-95-4	MAGNESIUM	1	4400	100		
7439-96-5	MANGANESE	1	230	1		
7439-98-7	MOLYBDENUM	1	18	1		
7440-02-0	NICKEL	1	12	2.1		
7440-09-7	POTASSIUM	1	2600	100		
7782-49-2	SELENIUM	5	11	2.6		
7440-22-4	SILVER	1	1	1	U	
7440-23-5	SODIUM	1	140	100		
7440-28-0	THALLIUM	5	5.2	5.2	U	
7440-31-5	TIN	1	5.2	5.2	U	
7440-62-2	VANADIUM	5	100	5.2		
7440-66-6	ZINC	1	62	2.1		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total URANIUM

## Method SW6020A

### Sample Results

Lab Name: ALS Environmental -- FC

Client Name: Weston Solutions, Inc.

Client Project ID: John Bully Mine TO 0035110603-110929-0002

Work Order Number: 1109363

Final Volume: 100 ml

Reporting Basis: Dry Weight

Matrix: SOIL

Prep Method: SW3050B

Result Units: UG/KG

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
AR-01-31-110928	1109363-1	09/28/2011	10/07/2011	10/12/2011	5.3	100	110000	110	*	1.004 g
JB-11-31-110928	1109363-2	09/28/2011	10/07/2011	10/12/2011	0.9	100	45000	100		1.009 g
JB-30-31-110928	1109363-3	09/28/2011	10/07/2011	10/12/2011	0.9	10	2300	9.8		1.032 g
JB-41-31-110928	1109363-4	09/28/2011	10/07/2011	10/12/2011	1.1	10	2600	10		1.014 g
JB-41-32-110928	1109363-5	09/28/2011	10/07/2011	10/12/2011	1.1	10	2100	9.7		1.037 g
JB-48-31-110928	1109363-6	09/28/2011	10/07/2011	10/12/2011	1.0	10	2600	10		1.014 g
JB-67-31-110928	1109363-7	09/28/2011	10/07/2011	10/12/2011	1.3	10	5700	9.9		1.027 g
JB-68-31-110928	1109363-8	09/28/2011	10/07/2011	10/12/2011	1.1	10	15000	9.8		1.029 g
JBBKGD-E-31-110928	1109363-9	09/28/2011	10/07/2011	10/12/2011	1.5	10	1100	9.9		1.023 g
JBBKGD-S-31-110928	1109363-10	09/28/2011	10/07/2011	10/12/2011	1.0	10	920	9.7		1.041 g
JBBKGD-W-31-110928	1109363-11	09/28/2011	10/07/2011	10/12/2011	0.7	10	800	9.7		1.034 g
VTP-01-31-110928	1109363-12	09/28/2011	10/07/2011	10/12/2011	4.0	100	36000	100		1.001 g

#### Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: IM1109363-1

Date Printed: Thursday, October 13, 2011

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LIMS Version: 6.536

# Total MERCURY

## Method SW7471A

### Sample Results

Lab Name: ALS Environmental -- FC

Client Name: Weston Solutions, Inc.

Client Project ID: John Bully Mine TO 0035110603-110929-0002

Work Order Number: 1109363

Final Volume: 100 g

Reporting Basis: Dry Weight

Matrix: SOIL

Prep Method: METHOD

Result Units: MG/KG

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
AR-01-31-110928	1109363-1	09/28/2011	10/10/2011	10/10/2011	5.3	1	0.046	0.034		0.617 g
JB-11-31-110928	1109363-2	09/28/2011	10/10/2011	10/10/2011	0.9	1	0.034	0.034	U	0.6 g
JB-30-31-110928	1109363-3	09/28/2011	10/10/2011	10/10/2011	0.9	1	0.033	0.033	U	0.616 g
JB-41-31-110928	1109363-4	09/28/2011	10/10/2011	10/10/2011	1.1	1	0.034	0.034	U	0.603 g
JB-41-32-110928	1109363-5	09/28/2011	10/10/2011	10/10/2011	1.1	1	0.034	0.034	U	0.603 g
JB-48-31-110928	1109363-6	09/28/2011	10/10/2011	10/10/2011	1.0	1	0.033	0.033	U	0.615 g
JB-67-31-110928	1109363-7	09/28/2011	10/10/2011	10/10/2011	1.3	1	0.033	0.033	U	0.615 g
JB-68-31-110928	1109363-8	09/28/2011	10/10/2011	10/10/2011	1.1	1	0.033	0.033	U	0.608 g
JBBKGD-E-31-110928	1109363-9	09/28/2011	10/10/2011	10/10/2011	1.5	1	0.033	0.033	U	0.611 g
JBBKGD-S-31-110928	1109363-10	09/28/2011	10/10/2011	10/10/2011	1.0	1	0.033	0.033	U	0.608 g
JBBKGD-W-31-110928	1109363-11	09/28/2011	10/10/2011	10/10/2011	0.7	1	0.033	0.033	U	0.602 g
VTP-01-31-110928	1109363-12	09/28/2011	10/10/2011	10/10/2011	4.0	1	0.097	0.034		0.609 g

#### Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: HG1109363-1

Date Printed: Thursday, October 13, 2011

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## Summary Report Forms

# ICP Metals

## Method SW6010B

### Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: IP111007-4MB

Sample Matrix: SOIL

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: N/A

File Name: 111010A.

Sample Aliquot: 1 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	39	20		
7440-36-0	ANTIMONY	1	2	2	U	
7440-38-2	ARSENIC	1	1	1	U	
7440-39-3	BARIUM	1	10	10	U	
7440-41-7	BERYLLIUM	1	0.5	0.5	U	
7440-43-9	CADMIUM	1	0.5	0.5	U	
7440-70-2	CALCIUM	1	100	100	U	
7440-47-3	CHROMIUM	1	1	1	U	
7440-48-4	COBALT	1	1	1	U	
7440-50-8	COPPER	1	1	1	U	
7439-89-6	IRON	1	10	10	U	
7439-92-1	LEAD	1	0.3	0.3	U	
7439-95-4	MAGNESIUM	1	100	100	U	
7439-96-5	MANGANESE	1	1	1	U	
7439-98-7	MOLYBDENUM	1	1	1	U	
7440-02-0	NICKEL	1	2	2	U	
7440-09-7	POTASSIUM	1	100	100	U	
7782-49-2	SELENIUM	1	0.5	0.5	U	
7440-22-4	SILVER	1	1	1	U	
7440-23-5	SODIUM	1	100	100	U	
7440-28-0	THALLIUM	1	1	1	U	
7440-31-5	TIN	1	5	5	U	
7440-62-2	VANADIUM	1	1	1	U	
7440-66-6	ZINC	1	2	2	U	

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010B

### Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

Client/Project ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: IP111007-4LCS

Sample Matrix: SOIL

% Moisture: N/A

Date Collected: N/A

Date Extracted: 10/07/2011

Date Analyzed: 10/10/2011

Prep Method: SW3050B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: N/A

File Name: 111010A.

Sample Aliquot: 1 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7429-90-5	ALUMINUM	200	207	20		104	80 - 120%
7440-36-0	ANTIMONY	50	46.1	2		92	80 - 120%
7440-38-2	ARSENIC	200	184	1		92	80 - 120%
7440-39-3	BARIUM	200	192	10		96	80 - 120%
7440-41-7	BERYLLIUM	5	4.68	0.5		94	80 - 120%
7440-43-9	CADMIUM	5	4.66	0.5		93	80 - 120%
7440-70-2	CALCIUM	4000	3860	100		96	80 - 120%
7440-47-3	CHROMIUM	20	18.5	1		93	80 - 120%
7440-48-4	COBALT	50	45.7	1		91	80 - 120%
7440-50-8	COPPER	25	25.2	1		101	80 - 120%
7439-89-6	IRON	100	97.1	10		97	80 - 120%
7439-92-1	LEAD	50	45.4	0.3		91	80 - 120%
7439-95-4	MAGNESIUM	4000	3740	100		93	80 - 120%
7439-96-5	MANGANESE	50	45.9	1		92	80 - 120%
7439-98-7	MOLYBDENUM	100	94.7	1		95	80 - 120%
7440-02-0	NICKEL	50	48.4	2		97	80 - 120%
7440-09-7	POTASSIUM	4000	3470	100		87	80 - 120%
7782-49-2	SELENIUM	200	164	0.5		82	80 - 120%
7440-22-4	SILVER	10	8.88	1		89	80 - 120%
7440-23-5	SODIUM	4000	3380	100		85	80 - 120%
7440-28-0	THALLIUM	200	198	1		99	80 - 120%
7440-31-5	TIN	50	50.1	5		100	80 - 120%
7440-62-2	VANADIUM	50	47.2	1		94	80 - 120%
7440-66-6	ZINC	50	45	2		90	80 - 120%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010B

### Matrix Spike And Matrix Spike Duplicate

Lab Name: **ALS Environmental -- FC**  
 Work Order Number: **1109363**  
 Client Name: **Weston Solutions, Inc.**  
 ClientProject ID: **John Bully Mine TO 0035110603-110929-0002**

Field ID: AR-01-31-110928  
 LabID: 1109363-1MS

Sample Matrix: SOIL  
 % Moisture: 5.3  
 Date Collected: 28-Sep-11  
 Date Extracted: 07-Oct-11  
 Date Analyzed: 10-Oct-11  
 Prep Method: SW3050 Rev B

Prep Batch: IP111007-4  
 QCBatchID: IP111007-4-5  
 Run ID: IT 111010-2A1  
 Cleanup: NONE  
 Basis: Dry Weight

Sample Aliquot: 1.016 g  
 Final Volume: 100 ml  
 Result Units: MG/KG  
 File Name: 111010A.

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7429-90-5	ALUMINUM	9500		13500		20.8	208	1913	80 - 120%
7440-36-0	ANTIMONY	2.1	U	26.9	N	2.08	52	52	80 - 120%
7440-38-2	ARSENIC	19		206		1.04	208	89	80 - 120%
7440-39-3	BARIUM	130		327		10.4	208	96	80 - 120%
7440-41-7	BERYLLIUM	0.92		5.72		0.52	5.2	92	80 - 120%
7440-43-9	CADMIUM	0.53	U	4.97		0.52	5.2	96	80 - 120%
7440-70-2	CALCIUM	39000		40400		104	4160	39	80 - 120%
7440-47-3	CHROMIUM	7.9		28.1		1.04	20.8	97	80 - 120%
7440-48-4	COBALT	6.6		52.3		1.04	52	88	80 - 120%
7440-50-8	COPPER	21		47.2		1.04	26	99	80 - 120%
7439-89-6	IRON	19000		21400		10.4	104	2240	80 - 120%
7439-92-1	LEAD	23		68.9		0.312	52	89	80 - 120%
7439-95-4	MAGNESIUM	4600		9110		104	4160	108	80 - 120%
7439-96-5	MANGANESE	320		373		1.04	52	97	80 - 120%
7439-98-7	MOLYBDENUM	15		102		1.04	104	84	80 - 120%
7440-02-0	NICKEL	12		58.8		2.08	52	89	80 - 120%
7440-09-7	POTASSIUM	3200		7830		104	4160	111	80 - 120%
7782-49-2	SELENIUM	15		187		0.52	208	83	80 - 120%
7440-22-4	SILVER	1.1	U	9.12		1.04	10.4	88	80 - 120%
7440-23-5	SODIUM	170		4450		104	4160	103	80 - 120%
7440-28-0	THALLIUM	1.1	U	196		1.04	208	94	80 - 120%
7440-31-5	TIN	5.3	U	51.4		5.2	52	99	80 - 120%
7440-62-2	VANADIUM	93		159	N	1.04	52	126	80 - 120%
7440-66-6	ZINC	51		100		2.08	52	94	80 - 120%

Data Package ID: **IT1109363-1**

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# ICP Metals

Method SW6010B

## Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: AR-01-31-110928

LabID: 1109363-1MSD

Sample Matrix: SOIL

% Moisture: 5.3

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

Sample Aliquot: 1.004 g

Final Volume: 100 ml

Result Units: MG/KG

File Name: 111010A.

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7429-90-5	ALUMINUM	13100		210	1718	21	20	3
7440-36-0	ANTIMONY	29	N	52.6	55	2.1	20	8
7440-38-2	ARSENIC	207		210	89	1.05	20	1
7440-39-3	BARIUM	325		210	94	10.5	20	1
7440-41-7	BERYLLIUM	5.76		5.26	92	0.526	20	1
7440-43-9	CADMIUM	5.03		5.26	96	0.526	20	1
7440-70-2	CALCIUM	40400		4210	39	105	20	0
7440-47-3	CHROMIUM	28.1		21	96	1.05	20	0
7440-48-4	COBALT	52.8		52.6	88	1.05	20	1
7440-50-8	COPPER	47.3		26.3	98	1.05	20	0
7439-89-6	IRON	21200		105	2019	10.5	20	1
7439-92-1	LEAD	69.6		52.6	89	0.316	20	1
7439-95-4	MAGNESIUM	9070		4210	106	105	20	0
7439-96-5	MANGANESE	371		52.6	94	1.05	20	0
7439-98-7	MOLYBDENUM	104		105	85	1.05	20	2
7440-02-0	NICKEL	58.7		52.6	88	2.1	20	0
7440-09-7	POTASSIUM	7750		4210	108	105	20	1
7782-49-2	SELENIUM	189		210	83	0.526	20	1
7440-22-4	SILVER	9.26		10.5	88	1.05	20	2
7440-23-5	SODIUM	4470		4210	102	105	20	0
7440-28-0	THALLIUM	197		210	94	1.05	20	0
7440-31-5	TIN	52		52.6	99	5.26	20	1
7440-62-2	VANADIUM	160	N	52.6	127	1.05	20	1
7440-66-6	ZINC	100		52.6	93	2.1	20	0

Data Package ID: IT1109363-1

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# ICP Metals

Method SW6010

## Analytical Spike Sample Recovery

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: AR-01-31-110928

LabID: 1109363-1A

Run ID: IT111010-2A1

Date Analyzed: 10-Oct-11

Result Units: mg/l

Target Analyte	Sample Result	Samp Qual	PS Result	PS Qual	Spike Added	PS % Rec.	Control Limits
ANTIMONY	0.0200	U	0.448		0.5	90	75 - 125%
VANADIUM	0.888		1.31		0.5	85	75 - 125%

Data Package ID: IT1109363-1

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# ICP Metals

## Method SW6010

### Duplicate Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: AR-01-31-110928

Lab ID: 1109363-1D

Sample Matrix: SOIL

% Moisture: 5.3

Date Collected: 09/28/2011

Date Extracted: 10/07/2011

Date Analyzed: 10/10/2011

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.003 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
7429-90-5	ALUMINUM	9500		10100		21.1	1	6	20
7440-36-0	ANTIMONY	2.1	U	2.11	U	2.11	1		20
7440-38-2	ARSENIC	19		20.6		1.05	1	6	20
7440-39-3	BARIUM	130		126		10.5	1	0	20
7440-41-7	BERYLLIUM	0.92		0.972		0.527	1		20
7440-43-9	CADMIUM	0.53	U	0.527	U	0.527	1		20
7440-70-2	CALCIUM	39000		36400		105	1	6	20
7440-47-3	CHROMIUM	7.9		8.52		1.05	1	7	20
7440-48-4	COBALT	6.6		7.03		1.05	1	6	20
7440-50-8	COPPER	21		20.6		1.05	1	4	20
7439-89-6	IRON	19000		20500		10.5	1	7	20
7439-92-1	LEAD	23		23.4		0.316	1	3	20
7439-95-4	MAGNESIUM	4600		4840		105	1	5	20
7439-96-5	MANGANESE	320		327		1.05	1	2	20
7439-98-7	MOLYBDENUM	15		14.8		1.05	1	1	20
7440-02-0	NICKEL	12		12.9		2.11	1	5	20
7440-09-7	POTASSIUM	3200		3350		105	1	4	20
7782-49-2	SELENIUM	15		13.7		0.527	1	6	20
7440-22-4	SILVER	1.1	U	1.05	U	1.05	1		20
7440-23-5	SODIUM	170		160		105	1		20
7440-28-0	THALLIUM	1.1	U	1.05	U	1.05	1		20
7440-31-5	TIN	5.3	U	5.27	U	5.27	1		20
7440-62-2	VANADIUM	93		97.8		1.05	1	5	20
7440-66-6	ZINC	51		54.3		2.11	1	6	20

Data Package ID: IT1109363-1

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# ICP Metals

Method SW6010

Serial Dilution

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

Client/Project ID: John Bully Mine TO 0035110603-110929-0002

Field ID: AR-01-31-110928

Lab ID: 1109363-1L

Run ID: IT111010-2A1

Date Analyzed: 10-Oct-11

Result Units: mg/l

CASNO	Target Analyte	Sample Result	Samp Qual	SD Result	SD Qual	EPA Qualifier	%D
7429-90-5	ALUMINUM	90.0		90.3			0
7440-36-0	ANTIMONY	0.0200	U	0.100	U		
7440-38-2	ARSENIC	0.185		0.194			5
7440-39-3	BARIUM	1.21		1.23			2
7440-41-7	BERYLLIUM	0.00873		0.0250	U		
7440-43-9	CADMIUM	0.00500	U	0.0250	U		
7440-70-2	CALCIUM	368		358			3
7440-47-3	CHROMIUM	0.0754		0.0762			
7440-48-4	COBALT	0.0632		0.0615			
7440-50-8	COPPER	0.204		0.193			6
7439-89-6	IRON	181		174			4
7439-92-1	LEAD	0.216		0.226			4
7439-95-4	MAGNESIUM	43.8		46.1			5
7439-96-5	MANGANESE	3.06		3.24			6
7439-98-7	MOLYBDENUM	0.139		0.138			1
7440-02-0	NICKEL	0.117		0.121			
7440-09-7	POTASSIUM	30.4		24.7		E	19
7782-49-2	SELENIUM	0.139		0.144			4
7440-22-4	SILVER	0.0100	U	0.0500	U		
7440-23-5	SODIUM	1.57		5.00	U		
7440-28-0	THALLIUM	0.0100	U	0.0500	U		
7440-31-5	TIN	0.0500	U	0.250	U		
7440-62-2	VANADIUM	0.888		0.924			4
7440-66-6	ZINC	0.488		0.531			9

Data Package ID: IT1109363-1

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# Prep Batch ID: IP111007-4

Start Date: 10/07/11

End Date: 10/07/11

Concentration Method: NONE

Batch Created By: bas

Start Time: 13:00

End Time: 17:00

Extract Method: SW3050B

Date Created: 10/07/11

Prep Analyst: Brent A. Stanfield

Initial Volume Units: g

Time Created: 12:27

Final Volume Units: ml

Validated By: bas

Date Validated: 10/07/11

Time Validated: 13:33

## Comments:

QC Batch ID: IP111007-4-5

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
IP111007-4	MB	XXXXXX	SOIL	XXXXXX	1	100	NONE	1	1109363
IP111007-4	LCS	XXXXXX	SOIL	XXXXXX	1	100	NONE	1	1109363
1109363-1	MS	AR-01-31-110928	SOIL	9/28/2011	1.016	100	NONE	1	1109363
1109363-1	MSD	AR-01-31-110928	SOIL	9/28/2011	1.004	100	NONE	1	1109363
1109363-1	DUP	AR-01-31-110928	SOIL	9/28/2011	1.003	100	NONE	1	1109363
1109363-1	SMP	AR-01-31-110928	SOIL	9/28/2011	1.004	100	NONE	1	1109363
1109363-10	SMP	JBBKGD-S-31-11092	SOIL	9/28/2011	1.041	100	NONE	1	1109363
1109363-11	SMP	JBBKGD-W-31-11092	SOIL	9/28/2011	1.034	100	NONE	1	1109363
1109363-12	SMP	VTP-01-31-110928	SOIL	9/28/2011	1.001	100	NONE	1	1109363
1109363-2	SMP	JB-11-31-110928	SOIL	9/28/2011	1.009	100	NONE	1	1109363
1109363-3	SMP	JB-30-31-110928	SOIL	9/28/2011	1.032	100	NONE	1	1109363
1109363-4	SMP	JB-41-31-110928	SOIL	9/28/2011	1.014	100	NONE	1	1109363
1109363-5	SMP	JB-41-32-110928	SOIL	9/28/2011	1.037	100	NONE	1	1109363
1109363-6	SMP	JB-48-31-110928	SOIL	9/28/2011	1.014	100	NONE	1	1109363
1109363-7	SMP	JB-67-31-110928	SOIL	9/28/2011	1.027	100	NONE	1	1109363
1109363-8	SMP	JB-68-31-110928	SOIL	9/28/2011	1.029	100	NONE	1	1109363
1109363-9	SMP	JBBKGD-E-31-11092	SOIL	9/28/2011	1.023	100	NONE	1	1109363

## QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicat
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standar	SMP	Field Sample
SYS	Sample Yield Spike		

# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: ICV

QC Type: Initial Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 12:29

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	25	26.6	0.2		107	90 - 110%
7440-36-0	ANTIMONY	0.25	0.252	0.02		101	90 - 110%
7440-38-2	ARSENIC	0.25	0.261	0.01		104	90 - 110%
7440-39-3	BARIUM	0.5	0.503	0.1		101	90 - 110%
7440-41-7	BERYLLIUM	0.25	0.251	0.005		100	90 - 110%
7440-43-9	CADMIUM	0.25	0.255	0.005		102	90 - 110%
7440-70-2	CALCIUM	25	26.1	1		104	90 - 110%
7440-47-3	CHROMIUM	0.5	0.500	0.01		100	90 - 110%
7440-48-4	COBALT	0.25	0.249	0.01		100	90 - 110%
7440-50-8	COPPER	0.5	0.509	0.01		102	90 - 110%
7439-89-6	IRON	10	10.4	0.1		104	90 - 110%
7439-92-1	LEAD	0.5	0.505	0.003		101	90 - 110%
7439-95-4	MAGNESIUM	25	26.2	1		105	90 - 110%
7439-96-5	MANGANESE	0.5	0.504	0.01		101	90 - 110%
7439-98-7	MOLYBDENUM	0.5	0.494	0.01		99	90 - 110%
7440-02-0	NICKEL	0.5	0.497	0.02		99	90 - 110%
7440-09-7	POTASSIUM	25	23.6	1		95	90 - 110%
7782-49-2	SELENIUM	0.5	0.509	0.005		102	90 - 110%
7440-22-4	SILVER	0.1	0.0979	0.01		98	90 - 110%
7440-23-5	SODIUM	25	24.2	1		97	90 - 110%
7440-28-0	THALLIUM	0.25	0.262	0.01		105	90 - 110%
7440-31-5	TIN	0.5	0.531	0.05		106	90 - 110%
7440-62-2	VANADIUM	0.25	0.248	0.01		99	90 - 110%
7440-66-6	ZINC	0.5	0.519	0.02		104	90 - 110%

Data Package ID: IT1109363-1

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV1

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 12:38

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	53.5	0.2		107	90 - 110%
7440-36-0	ANTIMONY	0.5	0.498	0.02		100	90 - 110%
7440-38-2	ARSENIC	0.5	0.509	0.01		102	90 - 110%
7440-39-3	BARIUM	1	1.00	0.1		100	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.491	0.005		98	90 - 110%
7440-43-9	CADMIUM	0.5	0.507	0.005		101	90 - 110%
7440-70-2	CALCIUM	50	52.0	1		104	90 - 110%
7440-47-3	CHROMIUM	1	0.974	0.01		97	90 - 110%
7440-48-4	COBALT	0.5	0.488	0.01		98	90 - 110%
7440-50-8	COPPER	1	1.02	0.01		102	90 - 110%
7439-89-6	IRON	20	20.9	0.1		104	90 - 110%
7439-92-1	LEAD	1	0.997	0.003		100	90 - 110%
7439-95-4	MAGNESIUM	50	52.3	1		105	90 - 110%
7439-96-5	MANGANESE	1	0.985	0.01		98	90 - 110%
7439-98-7	MOLYBDENUM	1	0.991	0.01		99	90 - 110%
7440-02-0	NICKEL	1	0.977	0.02		98	90 - 110%
7440-09-7	POTASSIUM	50	50.1	1		100	90 - 110%
7782-49-2	SELENIUM	1	1.02	0.005		102	90 - 110%
7440-22-4	SILVER	0.2	0.195	0.01		98	90 - 110%
7440-23-5	SODIUM	50	50.2	1		100	90 - 110%
7440-28-0	THALLIUM	0.5	0.525	0.01		105	90 - 110%
7440-31-5	TIN	1	1.06	0.05		106	90 - 110%
7440-62-2	VANADIUM	0.5	0.486	0.01		97	90 - 110%
7440-66-6	ZINC	1	1.00	0.02		100	90 - 110%

Data Package ID: IT1109363-1

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV2

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 13:04

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.9	0.2		106	90 - 110%
7440-36-0	ANTIMONY	0.5	0.502	0.02		100	90 - 110%
7440-38-2	ARSENIC	0.5	0.512	0.01		102	90 - 110%
7440-39-3	BARIUM	1	0.995	0.1		100	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.488	0.005		98	90 - 110%
7440-43-9	CADMIUM	0.5	0.508	0.005		102	90 - 110%
7440-70-2	CALCIUM	50	51.9	1		104	90 - 110%
7440-47-3	CHROMIUM	1	0.970	0.01		97	90 - 110%
7440-48-4	COBALT	0.5	0.487	0.01		97	90 - 110%
7440-50-8	COPPER	1	1.02	0.01		102	90 - 110%
7439-89-6	IRON	20	20.6	0.1		103	90 - 110%
7439-92-1	LEAD	1	0.991	0.003		99	90 - 110%
7439-95-4	MAGNESIUM	50	51.6	1		103	90 - 110%
7439-96-5	MANGANESE	1	0.975	0.01		98	90 - 110%
7439-98-7	MOLYBDENUM	1	0.990	0.01		99	90 - 110%
7440-02-0	NICKEL	1	0.995	0.02		100	90 - 110%
7440-09-7	POTASSIUM	50	49.6	1		99	90 - 110%
7782-49-2	SELENIUM	1	1.01	0.005		101	90 - 110%
7440-22-4	SILVER	0.2	0.195	0.01		98	90 - 110%
7440-23-5	SODIUM	50	49.4	1		99	90 - 110%
7440-28-0	THALLIUM	0.5	0.528	0.01		106	90 - 110%
7440-31-5	TIN	1	1.06	0.05		106	90 - 110%
7440-62-2	VANADIUM	0.5	0.485	0.01		97	90 - 110%
7440-66-6	ZINC	1	0.992	0.02		99	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV3  
QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1  
Date Analyzed: 10/10/2011  
Time Analyzed: 13:28  
Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.8	0.2		106	90 - 110%
7440-36-0	ANTIMONY	0.5	0.500	0.02		100	90 - 110%
7440-38-2	ARSENIC	0.5	0.509	0.01		102	90 - 110%
7440-39-3	BARIUM	1	0.994	0.1		99	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.483	0.005		97	90 - 110%
7440-43-9	CADMIUM	0.5	0.511	0.005		102	90 - 110%
7440-70-2	CALCIUM	50	51.6	1		103	90 - 110%
7440-47-3	CHROMIUM	1	0.962	0.01		96	90 - 110%
7440-48-4	COBALT	0.5	0.484	0.01		97	90 - 110%
7440-50-8	COPPER	1	1.03	0.01		103	90 - 110%
7439-89-6	IRON	20	20.5	0.1		102	90 - 110%
7439-92-1	LEAD	1	0.983	0.003		98	90 - 110%
7439-95-4	MAGNESIUM	50	51.4	1		103	90 - 110%
7439-96-5	MANGANESE	1	0.965	0.01		96	90 - 110%
7439-98-7	MOLYBDENUM	1	0.990	0.01		99	90 - 110%
7440-02-0	NICKEL	1	0.999	0.02		100	90 - 110%
7440-09-7	POTASSIUM	50	49.6	1		99	90 - 110%
7782-49-2	SELENIUM	1	1.00	0.005		100	90 - 110%
7440-22-4	SILVER	0.2	0.194	0.01		97	90 - 110%
7440-23-5	SODIUM	50	48.7	1		97	90 - 110%
7440-28-0	THALLIUM	0.5	0.534	0.01		107	90 - 110%
7440-31-5	TIN	1	1.07	0.05		107	90 - 110%
7440-62-2	VANADIUM	0.5	0.482	0.01		96	90 - 110%
7440-66-6	ZINC	1	0.977	0.02		98	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV4

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 13:53

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.7	0.2		105	90 - 110%
7440-36-0	ANTIMONY	0.5	0.504	0.02		101	90 - 110%
7440-38-2	ARSENIC	0.5	0.513	0.01		103	90 - 110%
7440-39-3	BARIUM	1	0.992	0.1		99	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.482	0.005		96	90 - 110%
7440-43-9	CADMIUM	0.5	0.517	0.005		103	90 - 110%
7440-70-2	CALCIUM	50	51.9	1		104	90 - 110%
7440-47-3	CHROMIUM	1	0.963	0.01		96	90 - 110%
7440-48-4	COBALT	0.5	0.486	0.01		97	90 - 110%
7440-50-8	COPPER	1	1.04	0.01		104	90 - 110%
7439-89-6	IRON	20	20.5	0.1		102	90 - 110%
7439-92-1	LEAD	1	0.979	0.003		98	90 - 110%
7439-95-4	MAGNESIUM	50	51.3	1		103	90 - 110%
7439-96-5	MANGANESE	1	0.962	0.01		96	90 - 110%
7439-98-7	MOLYBDENUM	1	0.995	0.01		100	90 - 110%
7440-02-0	NICKEL	1	1.01	0.02		101	90 - 110%
7440-09-7	POTASSIUM	50	49.6	1		99	90 - 110%
7782-49-2	SELENIUM	1	1.00	0.005		100	90 - 110%
7440-22-4	SILVER	0.2	0.196	0.01		98	90 - 110%
7440-23-5	SODIUM	50	49.1	1		98	90 - 110%
7440-28-0	THALLIUM	0.5	0.536	0.01		107	90 - 110%
7440-31-5	TIN	1	1.07	0.05		107	90 - 110%
7440-62-2	VANADIUM	0.5	0.483	0.01		97	90 - 110%
7440-66-6	ZINC	1	0.974	0.02		97	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV5

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 14:18

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.5	0.2		105	90 - 110%
7440-36-0	ANTIMONY	0.5	0.501	0.02		100	90 - 110%
7440-38-2	ARSENIC	0.5	0.517	0.01		103	90 - 110%
7440-39-3	BARIUM	1	0.987	0.1		99	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.479	0.005		96	90 - 110%
7440-43-9	CADMIUM	0.5	0.516	0.005		103	90 - 110%
7440-70-2	CALCIUM	50	51.6	1		103	90 - 110%
7440-47-3	CHROMIUM	1	0.956	0.01		96	90 - 110%
7440-48-4	COBALT	0.5	0.482	0.01		96	90 - 110%
7440-50-8	COPPER	1	1.04	0.01		104	90 - 110%
7439-89-6	IRON	20	20.3	0.1		102	90 - 110%
7439-92-1	LEAD	1	0.973	0.003		97	90 - 110%
7439-95-4	MAGNESIUM	50	51.1	1		102	90 - 110%
7439-96-5	MANGANESE	1	0.952	0.01		95	90 - 110%
7439-98-7	MOLYBDENUM	1	0.986	0.01		99	90 - 110%
7440-02-0	NICKEL	1	1.02	0.02		102	90 - 110%
7440-09-7	POTASSIUM	50	49.5	1		99	90 - 110%
7782-49-2	SELENIUM	1	0.995	0.005		100	90 - 110%
7440-22-4	SILVER	0.2	0.195	0.01		98	90 - 110%
7440-23-5	SODIUM	50	48.6	1		97	90 - 110%
7440-28-0	THALLIUM	0.5	0.538	0.01		108	90 - 110%
7440-31-5	TIN	1	1.07	0.05		107	90 - 110%
7440-62-2	VANADIUM	0.5	0.480	0.01		96	90 - 110%
7440-66-6	ZINC	1	0.961	0.02		96	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV6

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 14:42

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.5	0.2		105	90 - 110%
7440-36-0	ANTIMONY	0.5	0.501	0.02		100	90 - 110%
7440-38-2	ARSENIC	0.5	0.516	0.01		103	90 - 110%
7440-39-3	BARIUM	1	0.982	0.1		98	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.476	0.005		95	90 - 110%
7440-43-9	CADMIUM	0.5	0.520	0.005		104	90 - 110%
7440-70-2	CALCIUM	50	51.6	1		103	90 - 110%
7440-47-3	CHROMIUM	1	0.954	0.01		95	90 - 110%
7440-48-4	COBALT	0.5	0.482	0.01		96	90 - 110%
7440-50-8	COPPER	1	1.04	0.01		104	90 - 110%
7439-89-6	IRON	20	20.2	0.1		101	90 - 110%
7439-92-1	LEAD	1	0.965	0.003		96	90 - 110%
7439-95-4	MAGNESIUM	50	50.9	1		102	90 - 110%
7439-96-5	MANGANESE	1	0.947	0.01		95	90 - 110%
7439-98-7	MOLYBDENUM	1	0.981	0.01		98	90 - 110%
7440-02-0	NICKEL	1	1.02	0.02		102	90 - 110%
7440-09-7	POTASSIUM	50	49.5	1		99	90 - 110%
7782-49-2	SELENIUM	1	0.990	0.005		99	90 - 110%
7440-22-4	SILVER	0.2	0.196	0.01		98	90 - 110%
7440-23-5	SODIUM	50	48.8	1		98	90 - 110%
7440-28-0	THALLIUM	0.5	0.531	0.01		106	90 - 110%
7440-31-5	TIN	1	1.07	0.05		107	90 - 110%
7440-62-2	VANADIUM	0.5	0.479	0.01		96	90 - 110%
7440-66-6	ZINC	1	0.954	0.02		95	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV7

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 15:11

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.0	0.2		104	90 - 110%
7440-36-0	ANTIMONY	0.5	0.496	0.02		99	90 - 110%
7440-38-2	ARSENIC	0.5	0.508	0.01		102	90 - 110%
7440-39-3	BARIUM	1	0.971	0.1		97	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.469	0.005		94	90 - 110%
7440-43-9	CADMIUM	0.5	0.517	0.005		103	90 - 110%
7440-70-2	CALCIUM	50	51.2	1		102	90 - 110%
7440-47-3	CHROMIUM	1	0.944	0.01		94	90 - 110%
7440-48-4	COBALT	0.5	0.476	0.01		95	90 - 110%
7440-50-8	COPPER	1	1.03	0.01		103	90 - 110%
7439-89-6	IRON	20	19.9	0.1		99	90 - 110%
7439-92-1	LEAD	1	0.955	0.003		95	90 - 110%
7439-95-4	MAGNESIUM	50	50.5	1		101	90 - 110%
7439-96-5	MANGANESE	1	0.934	0.01		93	90 - 110%
7439-98-7	MOLYBDENUM	1	0.971	0.01		97	90 - 110%
7440-02-0	NICKEL	1	1.00	0.02		100	90 - 110%
7440-09-7	POTASSIUM	50	49.1	1		98	90 - 110%
7782-49-2	SELENIUM	1	0.968	0.005		97	90 - 110%
7440-22-4	SILVER	0.2	0.195	0.01		98	90 - 110%
7440-23-5	SODIUM	50	48.7	1		97	90 - 110%
7440-28-0	THALLIUM	0.5	0.529	0.01		106	90 - 110%
7440-31-5	TIN	1	1.05	0.05		105	90 - 110%
7440-62-2	VANADIUM	0.5	0.473	0.01		95	90 - 110%
7440-66-6	ZINC	1	0.936	0.02		94	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC  
 Work Order Number: 1109363  
 Client Name: Weston Solutions, Inc.  
 ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV8  
 QC Type: Continuing Calibration

Run ID: IT111010-2A1  
 Date Analyzed: 10/10/2011  
 Time Analyzed: 15:37  
 Result Units: MG/L

File Name: 111010A.

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.8	0.2		106	90 - 110%
7440-36-0	ANTIMONY	0.5	0.479	0.02		96	90 - 110%
7440-38-2	ARSENIC	0.5	0.499	0.01		100	90 - 110%
7440-39-3	BARIUM	1	0.973	0.1		97	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.479	0.005		96	90 - 110%
7440-43-9	CADMIUM	0.5	0.493	0.005		99	90 - 110%
7440-70-2	CALCIUM	50	50.8	1		102	90 - 110%
7440-47-3	CHROMIUM	1	0.956	0.01		96	90 - 110%
7440-48-4	COBALT	0.5	0.479	0.01		96	90 - 110%
7440-50-8	COPPER	1	1.01	0.01		101	90 - 110%
7439-89-6	IRON	20	20.2	0.1		101	90 - 110%
7439-92-1	LEAD	1	0.977	0.003		98	90 - 110%
7439-95-4	MAGNESIUM	50	51.5	1		103	90 - 110%
7439-96-5	MANGANESE	1	0.959	0.01		96	90 - 110%
7439-98-7	MOLYBDENUM	1	0.968	0.01		97	90 - 110%
7440-02-0	NICKEL	1	0.952	0.02		95	90 - 110%
7440-09-7	POTASSIUM	50	49.0	1		98	90 - 110%
7782-49-2	SELENIUM	1	1.01	0.005		101	90 - 110%
7440-22-4	SILVER	0.2	0.194	0.01		97	90 - 110%
7440-23-5	SODIUM	50	49.4	1		99	90 - 110%
7440-28-0	THALLIUM	0.5	0.514	0.01		103	90 - 110%
7440-31-5	TIN	1	1.05	0.05		105	90 - 110%
7440-62-2	VANADIUM	0.5	0.478	0.01		96	90 - 110%
7440-66-6	ZINC	1	0.983	0.02		98	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV9

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 15:50

Result Units: MG/L

File Name: 111010A.

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	53.0	0.2		106	90 - 110%
7440-36-0	ANTIMONY	0.5	0.482	0.02		96	90 - 110%
7440-38-2	ARSENIC	0.5	0.502	0.01		100	90 - 110%
7440-39-3	BARIUM	1	0.978	0.1		98	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.486	0.005		97	90 - 110%
7440-43-9	CADMIUM	0.5	0.501	0.005		100	90 - 110%
7440-70-2	CALCIUM	50	51.7	1		103	90 - 110%
7440-47-3	CHROMIUM	1	0.971	0.01		97	90 - 110%
7440-48-4	COBALT	0.5	0.486	0.01		97	90 - 110%
7440-50-8	COPPER	1	1.02	0.01		102	90 - 110%
7439-89-6	IRON	20	20.4	0.1		102	90 - 110%
7439-92-1	LEAD	1	1.00	0.003		100	90 - 110%
7439-95-4	MAGNESIUM	50	51.8	1		104	90 - 110%
7439-96-5	MANGANESE	1	0.970	0.01		97	90 - 110%
7439-98-7	MOLYBDENUM	1	0.985	0.01		98	90 - 110%
7440-02-0	NICKEL	1	0.971	0.02		97	90 - 110%
7440-09-7	POTASSIUM	50	49.1	1		98	90 - 110%
7782-49-2	SELENIUM	1	1.01	0.005		101	90 - 110%
7440-22-4	SILVER	0.2	0.195	0.01		98	90 - 110%
7440-23-5	SODIUM	50	49.5	1		99	90 - 110%
7440-28-0	THALLIUM	0.5	0.520	0.01		104	90 - 110%
7440-31-5	TIN	1	1.06	0.05		106	90 - 110%
7440-62-2	VANADIUM	0.5	0.482	0.01		96	90 - 110%
7440-66-6	ZINC	1	1.01	0.02		101	90 - 110%

Data Package ID: IT1109363-1

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV10

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 16:08

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.5	0.2		105	90 - 110%
7440-36-0	ANTIMONY	0.5	0.485	0.02		97	90 - 110%
7440-38-2	ARSENIC	0.5	0.503	0.01		101	90 - 110%
7440-39-3	BARIUM	1	0.972	0.1		97	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.482	0.005		96	90 - 110%
7440-43-9	CADMIUM	0.5	0.503	0.005		101	90 - 110%
7440-70-2	CALCIUM	50	51.4	1		103	90 - 110%
7440-47-3	CHROMIUM	1	0.963	0.01		96	90 - 110%
7440-48-4	COBALT	0.5	0.484	0.01		97	90 - 110%
7440-50-8	COPPER	1	1.02	0.01		102	90 - 110%
7439-89-6	IRON	20	20.3	0.1		101	90 - 110%
7439-92-1	LEAD	1	0.981	0.003		98	90 - 110%
7439-95-4	MAGNESIUM	50	51.4	1		103	90 - 110%
7439-96-5	MANGANESE	1	0.961	0.01		96	90 - 110%
7439-98-7	MOLYBDENUM	1	0.979	0.01		98	90 - 110%
7440-02-0	NICKEL	1	0.981	0.02		98	90 - 110%
7440-09-7	POTASSIUM	50	48.6	1		97	90 - 110%
7782-49-2	SELENIUM	1	1.01	0.005		101	90 - 110%
7440-22-4	SILVER	0.2	0.194	0.01		97	90 - 110%
7440-23-5	SODIUM	50	49.1	1		98	90 - 110%
7440-28-0	THALLIUM	0.5	0.524	0.01		105	90 - 110%
7440-31-5	TIN	1	1.06	0.05		106	90 - 110%
7440-62-2	VANADIUM	0.5	0.479	0.01		96	90 - 110%
7440-66-6	ZINC	1	0.997	0.02		100	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV11

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 16:37

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	51.9	0.2		104	90 - 110%
7440-36-0	ANTIMONY	0.5	0.473	0.02		95	90 - 110%
7440-38-2	ARSENIC	0.5	0.494	0.01		99	90 - 110%
7440-39-3	BARIUM	1	0.957	0.1		96	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.473	0.005		95	90 - 110%
7440-43-9	CADMIUM	0.5	0.497	0.005		99	90 - 110%
7440-70-2	CALCIUM	50	50.8	1		101	90 - 110%
7440-47-3	CHROMIUM	1	0.948	0.01		95	90 - 110%
7440-48-4	COBALT	0.5	0.475	0.01		95	90 - 110%
7440-50-8	COPPER	1	1.01	0.01		101	90 - 110%
7439-89-6	IRON	20	19.8	0.1		99	90 - 110%
7439-92-1	LEAD	1	0.974	0.003		97	90 - 110%
7439-95-4	MAGNESIUM	50	50.8	1		102	90 - 110%
7439-96-5	MANGANESE	1	0.944	0.01		94	90 - 110%
7439-98-7	MOLYBDENUM	1	0.958	0.01		96	90 - 110%
7440-02-0	NICKEL	1	0.959	0.02		96	90 - 110%
7440-09-7	POTASSIUM	50	48.2	1		96	90 - 110%
7782-49-2	SELENIUM	1	0.994	0.005		99	90 - 110%
7440-22-4	SILVER	0.2	0.192	0.01		96	90 - 110%
7440-23-5	SODIUM	50	48.7	1		97	90 - 110%
7440-28-0	THALLIUM	0.5	0.513	0.01		103	90 - 110%
7440-31-5	TIN	1	1.04	0.05		104	90 - 110%
7440-62-2	VANADIUM	0.5	0.473	0.01		95	90 - 110%
7440-66-6	ZINC	1	0.976	0.02		98	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental – FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

Client/Project ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV12

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 17:00

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.3	0.2		105	90 - 110%
7440-36-0	ANTIMONY	0.5	0.480	0.02		96	90 - 110%
7440-38-2	ARSENIC	0.5	0.498	0.01		100	90 - 110%
7440-39-3	BARIUM	1	0.965	0.1		97	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.477	0.005		95	90 - 110%
7440-43-9	CADMIUM	0.5	0.499	0.005		100	90 - 110%
7440-70-2	CALCIUM	50	51.0	1		102	90 - 110%
7440-47-3	CHROMIUM	1	0.955	0.01		96	90 - 110%
7440-48-4	COBALT	0.5	0.480	0.01		96	90 - 110%
7440-50-8	COPPER	1	1.02	0.01		102	90 - 110%
7439-89-6	IRON	20	20.0	0.1		100	90 - 110%
7439-92-1	LEAD	1	0.973	0.003		97	90 - 110%
7439-95-4	MAGNESIUM	50	51.2	1		102	90 - 110%
7439-96-5	MANGANESE	1	0.950	0.01		95	90 - 110%
7439-98-7	MOLYBDENUM	1	0.967	0.01		97	90 - 110%
7440-02-0	NICKEL	1	0.968	0.02		97	90 - 110%
7440-09-7	POTASSIUM	50	48.6	1		97	90 - 110%
7782-49-2	SELENIUM	1	0.991	0.005		99	90 - 110%
7440-22-4	SILVER	0.2	0.195	0.01		98	90 - 110%
7440-23-5	SODIUM	50	49.1	1		98	90 - 110%
7440-28-0	THALLIUM	0.5	0.520	0.01		104	90 - 110%
7440-31-5	TIN	1	1.05	0.05		105	90 - 110%
7440-62-2	VANADIUM	0.5	0.476	0.01		95	90 - 110%
7440-66-6	ZINC	1	0.977	0.02		98	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC  
 Work Order Number: 1109363  
 Client Name: Weston Solutions, Inc.  
 ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Run ID: IT111010-2A1  
 Date Analyzed: 10/10/2011  
 Time Analyzed: 17:25  
 Result Units: MG/L

Lab ID: CCV13  
 QC Type: Continuing Calibration

File Name: 111010A.

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.0	0.2		104	90 - 110%
7440-36-0	ANTIMONY	0.5	0.485	0.02		97	90 - 110%
7440-38-2	ARSENIC	0.5	0.508	0.01		102	90 - 110%
7440-39-3	BARIUM	1	0.964	0.1		96	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.480	0.005		96	90 - 110%
7440-43-9	CADMIUM	0.5	0.503	0.005		101	90 - 110%
7440-70-2	CALCIUM	50	51.5	1		103	90 - 110%
7440-47-3	CHROMIUM	1	0.961	0.01		96	90 - 110%
7440-48-4	COBALT	0.5	0.483	0.01		97	90 - 110%
7440-50-8	COPPER	1	1.02	0.01		102	90 - 110%
7439-89-6	IRON	20	20.0	0.1		100	90 - 110%
7439-92-1	LEAD	1	0.967	0.003		97	90 - 110%
7439-95-4	MAGNESIUM	50	51.1	1		102	90 - 110%
7439-96-5	MANGANESE	1	0.952	0.01		95	90 - 110%
7439-98-7	MOLYBDENUM	1	0.978	0.01		98	90 - 110%
7440-02-0	NICKEL	1	0.990	0.02		99	90 - 110%
7440-09-7	POTASSIUM	50	48.1	1		96	90 - 110%
7782-49-2	SELENIUM	1	0.993	0.005		99	90 - 110%
7440-22-4	SILVER	0.2	0.195	0.01		98	90 - 110%
7440-23-5	SODIUM	50	48.6	1		97	90 - 110%
7440-28-0	THALLIUM	0.5	0.522	0.01		104	90 - 110%
7440-31-5	TIN	1	1.06	0.05		106	90 - 110%
7440-62-2	VANADIUM	0.5	0.478	0.01		96	90 - 110%
7440-66-6	ZINC	1	0.990	0.02		99	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV14  
QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 17:47

Result Units: MG/L

File Name: 111010A.

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.4	0.2		105	90 - 110%
7440-36-0	ANTIMONY	0.5	0.490	0.02		98	90 - 110%
7440-38-2	ARSENIC	0.5	0.515	0.01		103	90 - 110%
7440-39-3	BARIUM	1	0.969	0.1		97	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.482	0.005		96	90 - 110%
7440-43-9	CADMIUM	0.5	0.509	0.005		102	90 - 110%
7440-70-2	CALCIUM	50	51.8	1		104	90 - 110%
7440-47-3	CHROMIUM	1	0.964	0.01		96	90 - 110%
7440-48-4	COBALT	0.5	0.486	0.01		97	90 - 110%
7440-50-8	COPPER	1	1.03	0.01		103	90 - 110%
7439-89-6	IRON	20	20.1	0.1		101	90 - 110%
7439-92-1	LEAD	1	0.975	0.003		97	90 - 110%
7439-95-4	MAGNESIUM	50	51.3	1		103	90 - 110%
7439-96-5	MANGANESE	1	0.955	0.01		95	90 - 110%
7439-98-7	MOLYBDENUM	1	0.982	0.01		98	90 - 110%
7440-02-0	NICKEL	1	1.00	0.02		100	90 - 110%
7440-09-7	POTASSIUM	50	48.3	1		97	90 - 110%
7782-49-2	SELENIUM	1	0.999	0.005		100	90 - 110%
7440-22-4	SILVER	0.2	0.195	0.01		98	90 - 110%
7440-23-5	SODIUM	50	48.8	1		98	90 - 110%
7440-28-0	THALLIUM	0.5	0.537	0.01		107	90 - 110%
7440-31-5	TIN	1	1.07	0.05		107	90 - 110%
7440-62-2	VANADIUM	0.5	0.480	0.01		96	90 - 110%
7440-66-6	ZINC	1	0.992	0.02		99	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV15

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 18:10

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	51.7	0.2		103	90 - 110%
7440-36-0	ANTIMONY	0.5	0.482	0.02		96	90 - 110%
7440-38-2	ARSENIC	0.5	0.495	0.01		99	90 - 110%
7440-39-3	BARIUM	1	0.960	0.1		96	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.467	0.005		93	90 - 110%
7440-43-9	CADMIUM	0.5	0.498	0.005		100	90 - 110%
7440-70-2	CALCIUM	50	50.2	1		100	90 - 110%
7440-47-3	CHROMIUM	1	0.937	0.01		94	90 - 110%
7440-48-4	COBALT	0.5	0.473	0.01		95	90 - 110%
7440-50-8	COPPER	1	1.02	0.01		102	90 - 110%
7439-89-6	IRON	20	19.6	0.1		98	90 - 110%
7439-92-1	LEAD	1	0.946	0.003		95	90 - 110%
7439-95-4	MAGNESIUM	50	50.3	1		101	90 - 110%
7439-96-5	MANGANESE	1	0.928	0.01		93	90 - 110%
7439-98-7	MOLYBDENUM	1	0.961	0.01		96	90 - 110%
7440-02-0	NICKEL	1	0.979	0.02		98	90 - 110%
7440-09-7	POTASSIUM	50	48.1	1		96	90 - 110%
7782-49-2	SELENIUM	1	0.982	0.005		98	90 - 110%
7440-22-4	SILVER	0.2	0.192	0.01		96	90 - 110%
7440-23-5	SODIUM	50	48.3	1		97	90 - 110%
7440-28-0	THALLIUM	0.5	0.528	0.01		106	90 - 110%
7440-31-5	TIN	1	1.04	0.05		104	90 - 110%
7440-62-2	VANADIUM	0.5	0.470	0.01		94	90 - 110%
7440-66-6	ZINC	1	0.950	0.02		95	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV16

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 18:33

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.4	0.2		105	90 - 110%
7440-36-0	ANTIMONY	0.5	0.478	0.02		96	90 - 110%
7440-38-2	ARSENIC	0.5	0.510	0.01		102	90 - 110%
7440-39-3	BARIUM	1	0.966	0.1		97	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.483	0.005		97	90 - 110%
7440-43-9	CADMIUM	0.5	0.497	0.005		99	90 - 110%
7440-70-2	CALCIUM	50	51.3	1		103	90 - 110%
7440-47-3	CHROMIUM	1	0.963	0.01		96	90 - 110%
7440-48-4	COBALT	0.5	0.485	0.01		97	90 - 110%
7440-50-8	COPPER	1	1.02	0.01		102	90 - 110%
7439-89-6	IRON	20	20.1	0.1		101	90 - 110%
7439-92-1	LEAD	1	0.977	0.003		98	90 - 110%
7439-95-4	MAGNESIUM	50	51.5	1		103	90 - 110%
7439-96-5	MANGANESE	1	0.959	0.01		96	90 - 110%
7439-98-7	MOLYBDENUM	1	0.978	0.01		98	90 - 110%
7440-02-0	NICKEL	1	0.977	0.02		98	90 - 110%
7440-09-7	POTASSIUM	50	48.1	1		96	90 - 110%
7782-49-2	SELENIUM	1	1.01	0.005		101	90 - 110%
7440-22-4	SILVER	0.2	0.194	0.01		97	90 - 110%
7440-23-5	SODIUM	50	48.6	1		97	90 - 110%
7440-28-0	THALLIUM	0.5	0.525	0.01		105	90 - 110%
7440-31-5	TIN	1	1.06	0.05		106	90 - 110%
7440-62-2	VANADIUM	0.5	0.481	0.01		96	90 - 110%
7440-66-6	ZINC	1	1.01	0.02		101	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV17

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 18:56

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.2	0.2		104	90 - 110%
7440-36-0	ANTIMONY	0.5	0.477	0.02		95	90 - 110%
7440-38-2	ARSENIC	0.5	0.509	0.01		102	90 - 110%
7440-39-3	BARIUM	1	0.964	0.1		96	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.479	0.005		96	90 - 110%
7440-43-9	CADMIUM	0.5	0.497	0.005		99	90 - 110%
7440-70-2	CALCIUM	50	50.8	1		102	90 - 110%
7440-47-3	CHROMIUM	1	0.956	0.01		96	90 - 110%
7440-48-4	COBALT	0.5	0.482	0.01		96	90 - 110%
7440-50-8	COPPER	1	1.02	0.01		102	90 - 110%
7439-89-6	IRON	20	20.0	0.1		100	90 - 110%
7439-92-1	LEAD	1	0.969	0.003		97	90 - 110%
7439-95-4	MAGNESIUM	50	51.2	1		102	90 - 110%
7439-96-5	MANGANESE	1	0.950	0.01		95	90 - 110%
7439-98-7	MOLYBDENUM	1	0.970	0.01		97	90 - 110%
7440-02-0	NICKEL	1	0.974	0.02		97	90 - 110%
7440-09-7	POTASSIUM	50	48.1	1		96	90 - 110%
7782-49-2	SELENIUM	1	1.00	0.005		100	90 - 110%
7440-22-4	SILVER	0.2	0.193	0.01		97	90 - 110%
7440-23-5	SODIUM	50	48.6	1		97	90 - 110%
7440-28-0	THALLIUM	0.5	0.520	0.01		104	90 - 110%
7440-31-5	TIN	1	1.05	0.05		105	90 - 110%
7440-62-2	VANADIUM	0.5	0.477	0.01		95	90 - 110%
7440-66-6	ZINC	1	0.992	0.02		99	90 - 110%

Data Package ID: IT1109363-1

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV18

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 19:19

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.1	0.2		104	90 - 110%
7440-36-0	ANTIMONY	0.5	0.482	0.02		96	90 - 110%
7440-38-2	ARSENIC	0.5	0.504	0.01		101	90 - 110%
7440-39-3	BARIUM	1	0.961	0.1		96	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.478	0.005		96	90 - 110%
7440-43-9	CADMIUM	0.5	0.495	0.005		99	90 - 110%
7440-70-2	CALCIUM	50	50.7	1		101	90 - 110%
7440-47-3	CHROMIUM	1	0.953	0.01		95	90 - 110%
7440-48-4	COBALT	0.5	0.480	0.01		96	90 - 110%
7440-50-8	COPPER	1	1.02	0.01		102	90 - 110%
7439-89-6	IRON	20	19.9	0.1		100	90 - 110%
7439-92-1	LEAD	1	0.967	0.003		97	90 - 110%
7439-95-4	MAGNESIUM	50	51.1	1		102	90 - 110%
7439-96-5	MANGANESE	1	0.947	0.01		95	90 - 110%
7439-98-7	MOLYBDENUM	1	0.970	0.01		97	90 - 110%
7440-02-0	NICKEL	1	0.974	0.02		97	90 - 110%
7440-09-7	POTASSIUM	50	47.9	1		96	90 - 110%
7782-49-2	SELENIUM	1	0.999	0.005		100	90 - 110%
7440-22-4	SILVER	0.2	0.194	0.01		97	90 - 110%
7440-23-5	SODIUM	50	48.5	1		97	90 - 110%
7440-28-0	THALLIUM	0.5	0.523	0.01		105	90 - 110%
7440-31-5	TIN	1	1.05	0.05		105	90 - 110%
7440-62-2	VANADIUM	0.5	0.475	0.01		95	90 - 110%
7440-66-6	ZINC	1	0.992	0.02		99	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV19

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 19:45

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.2	0.2		104	90 - 110%
7440-36-0	ANTIMONY	0.5	0.483	0.02		97	90 - 110%
7440-38-2	ARSENIC	0.5	0.509	0.01		102	90 - 110%
7440-39-3	BARIUM	1	0.964	0.1		96	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.478	0.005		96	90 - 110%
7440-43-9	CADMIUM	0.5	0.498	0.005		100	90 - 110%
7440-70-2	CALCIUM	50	50.9	1		102	90 - 110%
7440-47-3	CHROMIUM	1	0.954	0.01		95	90 - 110%
7440-48-4	COBALT	0.5	0.481	0.01		96	90 - 110%
7440-50-8	COPPER	1	1.03	0.01		103	90 - 110%
7439-89-6	IRON	20	19.9	0.1		100	90 - 110%
7439-92-1	LEAD	1	0.965	0.003		97	90 - 110%
7439-95-4	MAGNESIUM	50	51.1	1		102	90 - 110%
7439-96-5	MANGANESE	1	0.946	0.01		95	90 - 110%
7439-98-7	MOLYBDENUM	1	0.974	0.01		97	90 - 110%
7440-02-0	NICKEL	1	0.982	0.02		98	90 - 110%
7440-09-7	POTASSIUM	50	48.1	1		96	90 - 110%
7782-49-2	SELENIUM	1	0.997	0.005		100	90 - 110%
7440-22-4	SILVER	0.2	0.194	0.01		97	90 - 110%
7440-23-5	SODIUM	50	48.4	1		97	90 - 110%
7440-28-0	THALLIUM	0.5	0.526	0.01		105	90 - 110%
7440-31-5	TIN	1	1.06	0.05		106	90 - 110%
7440-62-2	VANADIUM	0.5	0.477	0.01		95	90 - 110%
7440-66-6	ZINC	1	0.990	0.02		99	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV20

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 20:08

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.0	0.2		104	90 - 110%
7440-36-0	ANTIMONY	0.5	0.480	0.02		96	90 - 110%
7440-38-2	ARSENIC	0.5	0.502	0.01		100	90 - 110%
7440-39-3	BARIUM	1	0.959	0.1		96	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.474	0.005		95	90 - 110%
7440-43-9	CADMIUM	0.5	0.496	0.005		99	90 - 110%
7440-70-2	CALCIUM	50	50.6	1		101	90 - 110%
7440-47-3	CHROMIUM	1	0.947	0.01		95	90 - 110%
7440-48-4	COBALT	0.5	0.479	0.01		96	90 - 110%
7440-50-8	COPPER	1	1.03	0.01		103	90 - 110%
7439-89-6	IRON	20	19.8	0.1		99	90 - 110%
7439-92-1	LEAD	1	0.959	0.003		96	90 - 110%
7439-95-4	MAGNESIUM	50	50.9	1		102	90 - 110%
7439-96-5	MANGANESE	1	0.940	0.01		94	90 - 110%
7439-98-7	MOLYBDENUM	1	0.965	0.01		97	90 - 110%
7440-02-0	NICKEL	1	0.978	0.02		98	90 - 110%
7440-09-7	POTASSIUM	50	47.9	1		96	90 - 110%
7782-49-2	SELENIUM	1	0.990	0.005		99	90 - 110%
7440-22-4	SILVER	0.2	0.194	0.01		97	90 - 110%
7440-23-5	SODIUM	50	48.6	1		97	90 - 110%
7440-28-0	THALLIUM	0.5	0.525	0.01		105	90 - 110%
7440-31-5	TIN	1	1.05	0.05		105	90 - 110%
7440-62-2	VANADIUM	0.5	0.474	0.01		95	90 - 110%
7440-66-6	ZINC	1	0.979	0.02		98	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV21

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 20:31

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	52.0	0.2		104	90 - 110%
7440-36-0	ANTIMONY	0.5	0.477	0.02		95	90 - 110%
7440-38-2	ARSENIC	0.5	0.505	0.01		101	90 - 110%
7440-39-3	BARIUM	1	0.958	0.1		96	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.473	0.005		95	90 - 110%
7440-43-9	CADMIUM	0.5	0.497	0.005		99	90 - 110%
7440-70-2	CALCIUM	50	50.5	1		101	90 - 110%
7440-47-3	CHROMIUM	1	0.948	0.01		95	90 - 110%
7440-48-4	COBALT	0.5	0.478	0.01		96	90 - 110%
7440-50-8	COPPER	1	1.03	0.01		103	90 - 110%
7439-89-6	IRON	20	19.8	0.1		99	90 - 110%
7439-92-1	LEAD	1	0.955	0.003		96	90 - 110%
7439-95-4	MAGNESIUM	50	50.9	1		102	90 - 110%
7439-96-5	MANGANESE	1	0.937	0.01		94	90 - 110%
7439-98-7	MOLYBDENUM	1	0.963	0.01		96	90 - 110%
7440-02-0	NICKEL	1	0.974	0.02		97	90 - 110%
7440-09-7	POTASSIUM	50	47.9	1		96	90 - 110%
7782-49-2	SELENIUM	1	0.985	0.005		99	90 - 110%
7440-22-4	SILVER	0.2	0.194	0.01		97	90 - 110%
7440-23-5	SODIUM	50	48.1	1		96	90 - 110%
7440-28-0	THALLIUM	0.5	0.524	0.01		105	90 - 110%
7440-31-5	TIN	1	1.05	0.05		105	90 - 110%
7440-62-2	VANADIUM	0.5	0.473	0.01		95	90 - 110%
7440-66-6	ZINC	1	0.979	0.02		98	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Verifications

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCV22

QC Type: Continuing Calibration

File Name: 111010A.

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 20:47

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
7429-90-5	ALUMINUM	50	51.5	0.2		103	90 - 110%
7440-36-0	ANTIMONY	0.5	0.478	0.02		96	90 - 110%
7440-38-2	ARSENIC	0.5	0.498	0.01		100	90 - 110%
7440-39-3	BARIUM	1	0.946	0.1		95	90 - 110%
7440-41-7	BERYLLIUM	0.5	0.465	0.005		93	90 - 110%
7440-43-9	CADMIUM	0.5	0.497	0.005		99	90 - 110%
7440-70-2	CALCIUM	50	50.1	1		100	90 - 110%
7440-47-3	CHROMIUM	1	0.934	0.01		93	90 - 110%
7440-48-4	COBALT	0.5	0.473	0.01		95	90 - 110%
7440-50-8	COPPER	1	1.02	0.01		102	90 - 110%
7439-89-6	IRON	20	19.6	0.1		98	90 - 110%
7439-92-1	LEAD	1	0.940	0.003		94	90 - 110%
7439-95-4	MAGNESIUM	50	50.4	1		101	90 - 110%
7439-96-5	MANGANESE	1	0.922	0.01		92	90 - 110%
7439-98-7	MOLYBDENUM	1	0.956	0.01		96	90 - 110%
7440-02-0	NICKEL	1	0.980	0.02		98	90 - 110%
7440-09-7	POTASSIUM	50	47.5	1		95	90 - 110%
7782-49-2	SELENIUM	1	0.976	0.005		98	90 - 110%
7440-22-4	SILVER	0.2	0.192	0.01		96	90 - 110%
7440-23-5	SODIUM	50	48.1	1		96	90 - 110%
7440-28-0	THALLIUM	0.5	0.517	0.01		103	90 - 110%
7440-31-5	TIN	1	1.03	0.05		103	90 - 110%
7440-62-2	VANADIUM	0.5	0.469	0.01		94	90 - 110%
7440-66-6	ZINC	1	0.959	0.02		96	90 - 110%

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: ICB  
QC Type: Initial Calibration

Run ID: IT111010-2A1  
Date Analyzed: 10/10/2011  
Time Analyzed: 12:31:00 PM  
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB1

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 12:42:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB2

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 1:06:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB3

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 1:30:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB4

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 1:55:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

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**ICP Metals**  
**Method SW6010**  
**Calibration Blanks**

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB5

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 2:20:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB6

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 2:44:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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**ICP Metals**  
**Method SW6010**  
**Calibration Blanks**

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB7

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 3:13:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB8

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 3:39:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB9

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 3:52:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB10

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 4:10:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB11  
QC Type: Continuing Calibration

Run ID: IT111010-2A1  
Date Analyzed: 10/10/2011  
Time Analyzed: 4:39:00 PM  
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB12  
QC Type: Continuing Calibration

Run ID: IT111010-2A1  
Date Analyzed: 10/10/2011  
Time Analyzed: 5:02:00 PM  
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB13

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 5:27:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB14

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 5:49:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB15

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 6:12:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB16  
QC Type: Continuing Calibration

Run ID: IT111010-2A1  
Date Analyzed: 10/10/2011  
Time Analyzed: 6:35:00 PM  
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB17

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 6:58:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB18  
QC Type: Continuing Calibration

Run ID: IT111010-2A1  
Date Analyzed: 10/10/2011  
Time Analyzed: 7:21:00 PM  
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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**ICP Metals**  
**Method SW6010**  
**Calibration Blanks**

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB19

QC Type: Continuing Calibration

Run ID: IT111010-2A1

Date Analyzed: 10/10/2011

Time Analyzed: 7:47:00 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB20  
QC Type: Continuing Calibration

Run ID: IT111010-2A1  
Date Analyzed: 10/10/2011  
Time Analyzed: 8:10:00 PM  
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB21  
QC Type: Continuing Calibration

Run ID: IT111010-2A1  
Date Analyzed: 10/10/2011  
Time Analyzed: 8:33:00 PM  
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

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# ICP Metals

## Method SW6010

### Calibration Blanks

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: CCB22  
QC Type: Continuing Calibration

Run ID: IT111010-2A1  
Date Analyzed: 10/10/2011  
Time Analyzed: 8:49:00 PM  
Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
7429-90-5	ALUMINUM	0.2	0.2	U
7440-36-0	ANTIMONY	0.02	0.02	U
7440-38-2	ARSENIC	0.01	0.01	U
7440-39-3	BARIUM	0.1	0.1	U
7440-41-7	BERYLLIUM	0.005	0.005	U
7440-43-9	CADMIUM	0.005	0.005	U
7440-70-2	CALCIUM	1	1	U
7440-47-3	CHROMIUM	0.01	0.01	U
7440-48-4	COBALT	0.01	0.01	U
7440-50-8	COPPER	0.01	0.01	U
7439-89-6	IRON	0.1	0.1	U
7439-92-1	LEAD	0.003	0.003	U
7439-95-4	MAGNESIUM	1	1	U
7439-96-5	MANGANESE	0.01	0.01	U
7439-98-7	MOLYBDENUM	0.01	0.01	U
7440-02-0	NICKEL	0.02	0.02	U
7440-09-7	POTASSIUM	1	1	U
7782-49-2	SELENIUM	0.005	0.005	U
7440-22-4	SILVER	0.01	0.01	U
7440-23-5	SODIUM	1	1	U
7440-28-0	THALLIUM	0.01	0.01	U
7440-31-5	TIN	0.05	0.05	U
7440-62-2	VANADIUM	0.01	0.01	U
7440-66-6	ZINC	0.02	0.02	U

Data Package ID: IT1109363-1

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# ICP Metals

## Method SW6010

### ICP Interference Check Sample

Lab Name: ALS Environmental -- FC  
 Work Order Number: 1109363  
 Client Name: Weston Solutions, Inc.  
 ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Run ID: IT111010-2A1  
 Date Analyzed: 10/10/2011  
 Result Units: MG/L

CASNO	Target Analyte	Spike Added		Results		% Rec.
		ICSA1	ICSAB1	ICSA1	ICSAB1	
7429-90-5	ALUMINUM	250	250	276	217	87
7440-36-0	ANTIMONY		0.6		0.581	97
7440-38-2	ARSENIC		0.1		0.098	98
7440-39-3	BARIUM		0.5		0.491	98
7440-41-7	BERYLLIUM		0.5		0.47	94
7440-43-9	CADMIUM		1		0.97100	97
7440-70-2	CALCIUM	250	250	270	266	106
7440-47-3	CHROMIUM		0.5		0.45300	91
7440-48-4	COBALT		0.5		0.46000	92
7440-50-8	COPPER		0.5		0.51700	103
7439-89-6	IRON	100	100	110	109	109
7439-92-1	LEAD		0.05		0.04740	95
7439-95-4	MAGNESIUM	250	250	273	269	108
7439-96-5	MANGANESE		0.5		0.473	95
7439-98-7	MOLYBDENUM		1		0.94300	94
7440-02-0	NICKEL		1		0.91600	92
7440-09-7	POTASSIUM					
7782-49-2	SELENIUM		0.05		0.04710	94
7440-22-4	SILVER		0.2		0.19	95
7440-23-5	SODIUM					
7440-28-0	THALLIUM		0.1		0.09730	97
7440-31-5	TIN		1		1.03	103
7440-62-2	VANADIUM		0.5		0.459	92
7440-66-6	ZINC		1		0.92400	92

Data Package ID: IT1109363-1

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# ICP Metals

## Method SW6010

### ICP Interference Check Sample

Lab Name: ALS Environmental -- FC  
 Work Order Number: 1109363  
 Client Name: Weston Solutions, Inc.  
 ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Run ID: IT111010-2A1  
 Date Analyzed: 10/10/2011  
 Result Units: MG/L

CASNO	Target Analyte	Spike Added		Results		% Rec.
		ICSA2	ICSAB2	ICSA2	ICSAB2	
7429-90-5	ALUMINUM	250	250	277	217	87
7440-36-0	ANTIMONY		0.6		0.581	97
7440-38-2	ARSENIC		0.1		0.098	98
7440-39-3	BARIUM		0.5		0.48500	97
7440-41-7	BERYLLIUM		0.5		0.46200	92
7440-43-9	CADMIUM		1		0.99400	99
7440-70-2	CALCIUM	250	250	275	265	106
7440-47-3	CHROMIUM		0.5		0.45	90
7440-48-4	COBALT		0.5		0.461	92
7440-50-8	COPPER		0.5		0.539	108
7439-89-6	IRON	100	100	108	105	105
7439-92-1	LEAD		0.05		0.04610	92
7439-95-4	MAGNESIUM	250	250	276	269	107
7439-96-5	MANGANESE		0.5		0.457	91
7439-98-7	MOLYBDENUM		1		0.946	95
7440-02-0	NICKEL		1		0.955	96
7440-09-7	POTASSIUM					
7782-49-2	SELENIUM		0.05		0.04720	94
7440-22-4	SILVER		0.2		0.19400	97
7440-23-5	SODIUM					
7440-28-0	THALLIUM		0.1		0.102	102
7440-31-5	TIN		1		1.05	105
7440-62-2	VANADIUM		0.5		0.459	92
7440-66-6	ZINC		1		0.908	91

Data Package ID: IT1109363-1

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# Metals Linear Ranges

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Instrument ID: ICPTTrace2

Active Date: 03/02/2010

Expiration Date: 05/31/2015

CASNO	Target Analyte	Concentration (ppm)
7429-90-5	ALUMINUM	500
7440-36-0	ANTIMONY	2
7440-38-2	ARSENIC	5
7440-39-3	BARIUM	10
7440-41-7	BERYLLIUM	1
7440-43-9	CADMIUM	5
7440-70-2	CALCIUM	500
7440-47-3	CHROMIUM	10
7440-48-4	COBALT	5
7440-50-8	COPPER	10
7439-89-6	IRON	200
7439-92-1	LEAD	10
7439-95-4	MAGNESIUM	500
7439-96-5	MANGANESE	10
7439-98-7	MOLYBDENUM	10
7440-02-0	NICKEL	10
7440-09-7	POTASSIUM	250
7782-49-2	SELENIUM	5
7440-22-4	SILVER	2
7440-23-5	SODIUM	150
7440-28-0	THALLIUM	5
7440-31-5	TIN	10
7440-61-1	URANIUM	50
7440-62-2	VANADIUM	5
7440-66-6	ZINC	10

# ICP Interelement Correction Factors

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Instrument ID: ICPTrace2

Active Date: 11/17/2009

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Expiration Date: 11/17/2010

Analyte	Lamda (nm)	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	Th
ALUMINUM																	
ANTIMONY									0.0103504								
BERYLLIUM																	
CADMIUM				0.0068507													
CHROMIUM																	
COBALT					-0.001400												
COPPER																	
LEAD		0.0002386										0.0000243					
SELENIUM												0.000036					
SILVER																	
THALLIUM												-0.000142			-0.000176		
TIN																	
URANIUM												0.0006809					
VANADIUM												-0.000194					

# ICP Interelement Correction Factors

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Instrument ID: ICPTrace2

Active Date: 11/17/2009

Expiration Date: 11/17/2010

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Analyte	Lamda (nm)	K	Se	Ag	Na	Tl	V	Zn	Sn	Ti	Mo	Li	Sr	B	Si	U	Zr
ALUMINUM							0.0125517				0.0033239					-0.028003	
ANTIMONY											-0.008489						
BERYLLIUM							0.0010513										
CADMIUM																	
CHROMIUM																0.0005333	
COBALT										0.002105							
COPPER																0.0007767	
LEAD										0.0002142	-0.001821					0.0009113	
SELENIUM																0.0000151	
SILVER																0.0006982	
THALLIUM							0.0006359			-0.000251						-0.000582	
TIN										0.0011632							
URANIUM																	
VANADIUM																	

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# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2

File Name: 111010A.

AnalRunID: IT111010-2A1

CalibRefID: IT111010-2A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
		MIXBHIGH	1	10/10/2011	11:53
		MIXAHIGH	1	10/10/2011	11:55
		MIXCHIGH	1	10/10/2011	11:57
		ICV	1	10/10/2011	12:29
		ICB	1	10/10/2011	12:31
		CRI1	1	10/10/2011	12:33
		ICSA1	1	10/10/2011	12:34
		ICSAB1	1	10/10/2011	12:36
		CCV1	1	10/10/2011	12:38
		CCB1	1	10/10/2011	12:42
		F111006-1MB	1	10/10/2011	12:44
		F111006-1	1	10/10/2011	12:46
		F111006-1LCS	1	10/10/2011	12:47
		1109351-1	1	10/10/2011	12:49
		1109351-2	1	10/10/2011	12:51
		1109351-4	1	10/10/2011	12:53
		1109351-5	1	10/10/2011	12:55
		1109381-1	1	10/10/2011	12:56
		1109381-1DUP	1	10/10/2011	12:58
		1109381-1SER	5	10/10/2011	13:00
		CCV2	1	10/10/2011	13:04
		CCB2	1	10/10/2011	13:06
		1109381-1MS	1	10/10/2011	13:08
		1109381-1MSD	1	10/10/2011	13:10
		1109382-1	1	10/10/2011	13:11
		1109382-2	1	10/10/2011	13:13
		1109382-4	1	10/10/2011	13:15
		1109382-5	1	10/10/2011	13:17
		1110028-10	1	10/10/2011	13:19
		1110028-11	1	10/10/2011	13:20
- Na		1110028-12	1	10/10/2011	13:22
- Na		1110028-13	1	10/10/2011	13:24
		CCV3	1	10/10/2011	13:28
		CCB3	1	10/10/2011	13:30
		1110028-14	1	10/10/2011	13:32

Data Package ID: IT1109363-1



# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2

File Name: 111010A.

AnalRunID: IT111010-2A1

CalibRefID: IT111010-2A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
		1110028-15	1	10/10/2011	13:33
		1110035-9	1	10/10/2011	13:35
		1110035-10	1	10/10/2011	13:37
- Na		1110035-11	1	10/10/2011	13:39
		1110035-12	1	10/10/2011	13:41
		IP111007-2MB	1	10/10/2011	13:45
		ZZZ	1	10/10/2011	13:46
		IP111007-2LCS	1	10/10/2011	13:48
		IP111007-2LCSD	1	10/10/2011	13:50
		CCV4	1	10/10/2011	13:53
		CCB4	1	10/10/2011	13:55
- S		1109372-1	1	10/10/2011	13:57
- S		1109372-1DUP	1	10/10/2011	13:59
- S		1109372-1SER	5	10/10/2011	14:01
+ B,Fe,P,Si,Sr,Ti		1109372-1A	1	10/10/2011	14:03
- S		1109372-2	1	10/10/2011	14:05
- S		1109372-3	1	10/10/2011	14:07
- S		1109372-4	1	10/10/2011	14:08
- S		1109372-5	1	10/10/2011	14:10
- S		1109372-6	1	10/10/2011	14:12
		1110028-1	1	10/10/2011	14:14
		CCV5	1	10/10/2011	14:18
		CCB5	1	10/10/2011	14:20
		1110028-2	1	10/10/2011	14:21
- Na		1110028-4	1	10/10/2011	14:23
- Na		1110028-5	1	10/10/2011	14:25
		1110028-7	1	10/10/2011	14:27
		1110028-8	1	10/10/2011	14:29
		1110035-1	1	10/10/2011	14:31
		1110035-4	1	10/10/2011	14:32
- Na		1110035-5	1	10/10/2011	14:34
		1110035-7	1	10/10/2011	14:36
		IP111007-4MB	1	10/10/2011	14:40
		CCV6	1	10/10/2011	14:42
		CCB6	1	10/10/2011	14:44

Data Package ID: IT1109363-1

# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2

File Name: 111010A.

AnalRunID: IT111010-2A1

CalibRefID: IT111010-2A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
		IP111007-4	1	10/10/2011	14:51
		IP111007-4LCS	1	10/10/2011	14:53
		IP111007-4LCSD	1	10/10/2011	14:55
- Fe,Mn,Pb,Se,Tl,U,V		1109301-1	1	10/10/2011	14:56
- Fe,Mn,Pb,Se,Tl,U,V		1109301-1DUP	1	10/10/2011	14:58
- Fe,Mn,Pb,Se,Tl,U,V		1109301-1SER	5	10/10/2011	15:00
- Fe,Mn,Pb,Se,Tl,U,V		1109301-1MS	1	10/10/2011	15:02
- Fe,Mn,Pb,Se,Tl,U,V		1109301-1MSD	1	10/10/2011	15:04
		ZZZ	1	10/10/2011	15:06
		ZZZ	1	10/10/2011	15:08
		CCV7	1	10/10/2011	15:11
		CCB7	1	10/10/2011	15:13
		ZZZ	1	10/10/2011	15:15
		ZZZ	1	10/10/2011	15:17
		ZZZ	1	10/10/2011	15:26
		ZZZ	1	10/10/2011	15:28
		CCV8	1	10/10/2011	15:37
		CCB8	1	10/10/2011	15:39
	AR-01-31-110928	1109363-1	1	10/10/2011	15:41
	AR-01-31-110928	1109363-1DUP	1	10/10/2011	15:43
	AR-01-31-110928	1109363-1SER	5	10/10/2011	15:45
	AR-01-31-110928	1109363-1MS	1	10/10/2011	15:47
	AR-01-31-110928	1109363-1MSD	1	10/10/2011	15:48
		CCV9	1	10/10/2011	15:50
		CCB9	1	10/10/2011	15:52
	JB-11-31-110928	1109363-2	1	10/10/2011	15:54
	JB-30-31-110928	1109363-3	1	10/10/2011	15:56
	JB-41-31-110928	1109363-4	1	10/10/2011	15:58
	JB-41-32-110928	1109363-5	1	10/10/2011	16:00
	JB-48-31-110928	1109363-6	1	10/10/2011	16:02
	JB-67-31-110928	1109363-7	1	10/10/2011	16:04
	JB-68-31-110928	1109363-8	1	10/10/2011	16:05
		CCV10	1	10/10/2011	16:08
		CCB10	1	10/10/2011	16:10
	JBBKGD-E-31-110928	1109363-9	1	10/10/2011	16:13

Data Package ID: IT1109363-1

# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2

File Name: 111010A.

AnalRunID: IT111010-2A1

CalibRefID: IT111010-2A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
	JBBKGD-S-31-110928	1109363-10	1	10/10/2011	16:14
	JBBKGD-W-31-110928	1109363-11	1	10/10/2011	16:16
- Fe,Pb,Se,Ti,U,V	VTP-01-31-110928	1109363-12	1	10/10/2011	16:18
		IP111007-5MB	1	10/10/2011	16:20
		IP111007-5	1	10/10/2011	16:22
		IP111007-5LCS	1	10/10/2011	16:28
		1109362-1	1	10/10/2011	16:30
		1109362-1DUP	1	10/10/2011	16:32
		1109362-1SER	5	10/10/2011	16:34
		CCV11	1	10/10/2011	16:37
		CCB11	1	10/10/2011	16:39
		1109362-1MS	1	10/10/2011	16:41
		1109362-1MSD	1	10/10/2011	16:43
		1109362-2	1	10/10/2011	16:44
		1109362-3	1	10/10/2011	16:46
		1109362-4	1	10/10/2011	16:48
		1109362-5	1	10/10/2011	16:50
		1109362-6	1	10/10/2011	16:52
		1109362-7	1	10/10/2011	16:54
		1109362-8	1	10/10/2011	16:56
		1109362-9	1	10/10/2011	16:58
		CCV12	1	10/10/2011	17:00
		CCB12	1	10/10/2011	17:02
		1109362-10	1	10/10/2011	17:04
		1109362-11	1	10/10/2011	17:06
		1109362-12	1	10/10/2011	17:08
		1109362-13	1	10/10/2011	17:10
		1109362-14	1	10/10/2011	17:12
		IP111007-3MB	1	10/10/2011	17:15
		IP111007-3	1	10/10/2011	17:16
		IP111007-3LCS	1	10/10/2011	17:18
		1110025-1	10	10/10/2011	17:20
		1110025-1DUP	10	10/10/2011	17:23
		CCV13	1	10/10/2011	17:25
		CCB13	1	10/10/2011	17:27

Data Package ID: IT1109363-1

# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2

File Name: 111010A.

AnalRunID: IT111010-2A1

CalibRefID: IT111010-2A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
		1110025-1SER	50	10/10/2011	17:29
		1110025-1MS	10	10/10/2011	17:30
		1110025-1MSD	10	10/10/2011	17:32
		1110025-2	5	10/10/2011	17:34
		1110025-3	5	10/10/2011	17:36
		1110025-4	5	10/10/2011	17:38
		1110025-5	5	10/10/2011	17:40
		1110025-6	5	10/10/2011	17:42
		1110025-7	5	10/10/2011	17:44
		1110025-8	5	10/10/2011	17:45
		CCV14	1	10/10/2011	17:47
		CCB14	1	10/10/2011	17:49
		1110025-9	5	10/10/2011	17:51
		1110025-10	5	10/10/2011	17:53
		1110025-11	5	10/10/2011	17:55
		1110025-12	5	10/10/2011	17:57
		1110025-13	5	10/10/2011	17:59
		1110025-14	5	10/10/2011	18:01
		IP111010-2MB	1	10/10/2011	18:03
		IP111010-2	1	10/10/2011	18:04
		IP111010-2LCS	1	10/10/2011	18:06
-S		1110088-1	2	10/10/2011	18:08
		CCV15	1	10/10/2011	18:10
		CCB15	1	10/10/2011	18:12
-S		1110088-1DUP	2	10/10/2011	18:14
-S		1110088-1SER	10	10/10/2011	18:16
-S		1110088-1MS	2	10/10/2011	18:18
-S		1110088-1MSD	2	10/10/2011	18:20
-S		1110088-2	2	10/10/2011	18:22
-S		1110088-3	2	10/10/2011	18:23
+Ca		1110088-4	2	10/10/2011	18:25
+Ca		1110088-5	2	10/10/2011	18:27
-S		1110088-6	2	10/10/2011	18:29
-S		1110088-7	2	10/10/2011	18:31
		CCV16	1	10/10/2011	18:33

Data Package ID: IT1109363-1

# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2

File Name: 111010A.

AnalRunID: IT111010-2A1

CalibRefID: IT111010-2A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
		CCB16	1	10/10/2011	18:35
-S		1110088-8	2	10/10/2011	18:37
-S		1110088-9	2	10/10/2011	18:39
-S		1110088-10	2	10/10/2011	18:41
-S		1110088-11	2	10/10/2011	18:43
-S		1110088-12	2	10/10/2011	18:44
		1110088-13	5	10/10/2011	18:46
		1110088-14	5	10/10/2011	18:48
-S		1110088-15	2	10/10/2011	18:50
-S		1110088-16	2	10/10/2011	18:52
-S		1110088-17	2	10/10/2011	18:54
		CCV17	1	10/10/2011	18:56
		CCB17	1	10/10/2011	18:58
+ Ca		1110088-18	2	10/10/2011	19:00
+ Ca		1110088-19	2	10/10/2011	19:02
+ Ca		1110088-20	2	10/10/2011	19:04
		IP111010-3MB	1	10/10/2011	19:05
		IP111010-3	1	10/10/2011	19:07
		IP111010-3LCS	1	10/10/2011	19:09
-S		1110039-1	1	10/10/2011	19:11
		1110039-2	1	10/10/2011	19:13
		1110039-3	1	10/10/2011	19:15
		1110039-3DUP	1	10/10/2011	19:17
		CCV18	1	10/10/2011	19:19
		CCB18	1	10/10/2011	19:21
		1110039-3SER	5	10/10/2011	19:23
		1110039-3MS	1	10/10/2011	19:24
		1110039-3MSD	1	10/10/2011	19:26
		1110053-1	1	10/10/2011	19:28
		1110053-2	1	10/10/2011	19:33
-S		1110088-21	2	10/10/2011	19:35
-S		1110088-22	2	10/10/2011	19:37
-S		1110088-23	2	10/10/2011	19:39
-S		1110088-24	2	10/10/2011	19:41
-S		1110088-25	2	10/10/2011	19:43

Data Package ID: IT1109363-1

# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2

File Name: 111010A.

AnalRunID: IT111010-2A1

CalibRefID: IT111010-2A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
		CCV19	1	10/10/2011	19:45
		CCB19	1	10/10/2011	19:47
+ Ca		1110088-26	2	10/10/2011	19:49
		1110088-27	5	10/10/2011	19:51
		1110088-28	5	10/10/2011	19:53
+ S		1109372-1	10	10/10/2011	19:55
+ S		1109372-1DUP	10	10/10/2011	19:56
+ S		1109372-1SER	50	10/10/2011	19:58
+ S		1109372-1A	10	10/10/2011	20:00
+ Fe,Mn,Pb,Se,Ti,U,V		1109301-1	10	10/10/2011	20:03
+ Fe,Mn,Pb,Se,Ti,U,V		1109301-1DUP	10	10/10/2011	20:05
+ Fe,Mn,Pb,Se,Ti,U,V		1109301-1SER	50	10/10/2011	20:06
		CCV20	1	10/10/2011	20:08
		CCB20	1	10/10/2011	20:10
+ Fe,Mn,Pb,Se,Ti,U,V		1109301-1MS	10	10/10/2011	20:12
+ Fe,Mn,Pb,Se,Ti,U,V		1109301-1MSD	10	10/10/2011	20:14
+ As,Ba,Ca,Cd,Cu,Mo,Sb,Ti,Zn		1109301-1A	1	10/10/2011	20:16
+ Sb,V	AR-01-31-110928	1109363-1A	1	10/10/2011	20:18
+ Fe,Pb,Se,Ti,U,V	VTP-01-31-110928	1109363-12	5	10/10/2011	20:20
+ Sb,V		1109362-1A	1	10/10/2011	20:22
- Ca,S		1110088-4	1	10/10/2011	20:23
- Ca,S		1110088-5	1	10/10/2011	20:25
- Ca,S		1110088-18	1	10/10/2011	20:27
- Ca,S		1110088-19	1	10/10/2011	20:29
		CCV21	1	10/10/2011	20:31
		CCB21	1	10/10/2011	20:33
- Ca,S		1110088-20	1	10/10/2011	20:35
- Ca,S		1110088-26	1	10/10/2011	20:37
+ V		1109301-1A	10	10/10/2011	20:39
		CRI2	1	10/10/2011	20:41
		ICSA2	1	10/10/2011	20:43
		ICSAB2	1	10/10/2011	20:45
		CCV22	1	10/10/2011	20:47
		CCB22	1	10/10/2011	20:49

Data Package ID: IT1109363-1

# ICPMS Metals

Method SW6020A

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: IP111007-4MB

Sample Matrix: SOIL

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07-Oct-11

Date Analyzed: 12-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-3

Run ID: IM111012-10A1

Cleanup: NONE

Basis: N/A

File Name: 050SMPL\_

Sample Aliquot: 1 g

Final Volume: 100 ml

Result Units: UG/KG

Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7440-61-1	URANIUM	10	10	10	U	

Data Package ID: IM1109363-1

Date Printed: Thursday, October 13, 2011

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**ICPMS Metals**  
**Method SW6020A**  
**Laboratory Control Sample**

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: IM111007-4LCS

Sample Matrix: SOIL

% Moisture: N/A

Date Collected: N/A

Date Extracted: 10/07/2011

Date Analyzed: 10/12/2011

Prep Method: SW3050B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-3

Run ID: IM111012-10A1

Cleanup: NONE

Basis: N/A

File Name: 052SMPL\_

Sample Aliquot: 1 g

Final Volume: 100 ml

Result Units: UG/KG

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7440-61-1	URANIUM	1000	1020	10		102	80 - 120%

Data Package ID: IM1109363-1

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# ICPMS Metals

Method SW6020A

## Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: AR-01-31-110928  
LabID: 1109363-1MS

Sample Matrix: SOIL  
% Moisture: 5.3  
Date Collected: 28-Sep-11  
Date Extracted: 07-Oct-11  
Date Analyzed: 12-Oct-11  
Prep Method: SW3050 Rev B

Prep Batch: IP111007-4  
QCBatchID: IP111007-4-3  
Run ID: IM111012-10A1  
Cleanup: NONE  
Basis: Dry Weight

Sample Aliquot: 1.016 g  
Final Volume: 100 ml  
Result Units: UG/KG  
File Name: 056SMPL\_

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7440-61-1	URANIUM	110000		84600		104	1040	-2610	75 - 125%

Field ID: AR-01-31-110928  
LabID: 1109363-1MSD

Sample Matrix: SOIL  
% Moisture: 5.3  
Date Collected: 28-Sep-11  
Date Extracted: 07-Oct-11  
Date Analyzed: 12-Oct-11  
Prep Method: SW3050 Rev B

Prep Batch: IP111007-4  
QCBatchID: IP111007-4-3  
Run ID: IM111012-10A1  
Cleanup: NONE  
Basis: Dry Weight

Sample Aliquot: 1.004 g  
Final Volume: 100 ml  
Result Units: UG/KG  
File Name: 057SMPL\_

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7440-61-1	URANIUM	79200		1050	-3096	105	20	7

Data Package ID: IM1109363-1

Date Printed: Thursday, October 13, 2011

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**ICPMS Metals**  
**Method SW6020**  
**Duplicate Sample Results**

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: AR-01-31-110928

Lab ID: 1109363-1D

Sample Matrix: SOIL

% Moisture: 5.3

Date Collected: 09/28/2011

Date Extracted: 10/07/2011

Date Analyzed: 10/12/2011

Prep Batch: IP111007-4

QCBatchID: IP111007-4-3

Run ID: IM111012-10A1

Cleanup: NONE

Basis: Dry Weight

File Name: 054SMPL\_

Sample Aliquot: 1.003 g

Final Volume: 100 ml

Result Units: UG/KG

Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
7440-61-1	URANIUM	110000		78400	*	105	100	35	20

Data Package ID: IM1109363-1

Date Printed: Thursday, October 13, 2011

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# ICPMS Metals

Method SW6020

Serial Dilution

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

Client/Project ID: John Bully Mine TO 0035110603-110929-0002

Field ID: AR-01-31-110928

Lab ID: 1109363-1L

Run ID: IM111012-10A1

Date Analyzed: 12-Oct-11

Result Units: ug/l

CASNO	Target Analyte	Sample Result	Samp Qual	SD Result	SD Qual	EPA Qualifier	%D
7440-61-1	URANIUM	10.6		10.4			2

Data Package ID: IM1109363-1

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# Prep Batch ID: IP111007-4

Start Date: 10/07/11

End Date: 10/07/11

Concentration Method: NONE

Batch Created By: bas

Start Time: 13:00

End Time: 17:00

Extract Method: SW3050B

Date Created: 10/07/11

Prep Analyst: Brent A. Stanfield

Initial Volume Units: g

Time Created: 12:27

Comments:

Final Volume Units: ml

Validated By: bas

Date Validated: 10/07/11

Time Validated: 13:33

QC Batch ID: IP111007-4-3

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
IP111007-4	MB	XXXXXX	SOIL	XXXXXX	1	100	NONE	1	1109363
IM111007-4	LCS	XXXXXX	SOIL	XXXXXX	1	100	NONE	1	1109363
1109363-1	MS	AR-01-31-110928	SOIL	9/28/2011	1.016	100	NONE	1	1109363
1109363-1	MSD	AR-01-31-110928	SOIL	9/28/2011	1.004	100	NONE	1	1109363
1109363-1	DUP	AR-01-31-110928	SOIL	9/28/2011	1.003	100	NONE	1	1109363
1109363-1	SMP	AR-01-31-110928	SOIL	9/28/2011	1.004	100	NONE	1	1109363
1109363-10	SMP	JBBKGD-S-31-11092	SOIL	9/28/2011	1.041	100	NONE	1	1109363
1109363-11	SMP	JBBKGD-W-31-11092	SOIL	9/28/2011	1.034	100	NONE	1	1109363
1109363-12	SMP	VTP-01-31-110928	SOIL	9/28/2011	1.001	100	NONE	1	1109363
1109363-2	SMP	JB-11-31-110928	SOIL	9/28/2011	1.009	100	NONE	1	1109363
1109363-3	SMP	JB-30-31-110928	SOIL	9/28/2011	1.032	100	NONE	1	1109363
1109363-4	SMP	JB-41-31-110928	SOIL	9/28/2011	1.014	100	NONE	1	1109363
1109363-5	SMP	JB-41-32-110928	SOIL	9/28/2011	1.037	100	NONE	1	1109363
1109363-6	SMP	JB-48-31-110928	SOIL	9/28/2011	1.014	100	NONE	1	1109363
1109363-7	SMP	JB-67-31-110928	SOIL	9/28/2011	1.027	100	NONE	1	1109363
1109363-8	SMP	JB-68-31-110928	SOIL	9/28/2011	1.029	100	NONE	1	1109363
1109363-9	SMP	JBBKGD-E-31-11092	SOIL	9/28/2011	1.023	100	NONE	1	1109363

## QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicat
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standar	SMP	Field Sample
SYS	Sample Yield Spike		

**URANIUM**  
**Method SW6020**  
**Calibration Verifications**

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Run ID: IM111012-10A1

Result Units: MG/L

Lab ID	Verification Type	Date Analyzed	Time Analyzed	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
ICV	Initial Calibration	10/12/2011	12:20	0.002	0.00192	0.00001	N/A	96	90 - 110
CCV1	Continuing Calibration	10/12/2011	12:54	0.001	0.000988	0.00001	N/A	99	90 - 110
CCV2	Continuing Calibration	10/12/2011	13:22	0.001	0.00105	0.00001	N/A	105	90 - 110
CCV3	Continuing Calibration	10/12/2011	13:59	0.001	0.00104	0.00001	N/A	104	90 - 110
CCV4	Continuing Calibration	10/12/2011	14:28	0.001	0.00104	0.00001	N/A	104	90 - 110
CCV5	Continuing Calibration	10/12/2011	14:53	0.001	0.00102	0.00001	N/A	102	90 - 110
CCV6	Continuing Calibration	10/12/2011	15:21	0.001	0.00104	0.00001	N/A	104	90 - 110
CCV7	Continuing Calibration	10/12/2011	15:47	0.001	0.00104	0.00001	N/A	104	90 - 110
CCV8	Continuing Calibration	10/12/2011	16:16	0.001	0.00105	0.00001	N/A	105	90 - 110
CCV9	Continuing Calibration	10/12/2011	16:44	0.001	0.00104	0.00001	N/A	104	90 - 110

Data Package ID: IM1109363-1

Date Printed: Thursday, October 13, 2011

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**URANIUM**  
**Method SW6020**  
**Calibration Blanks**

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Run ID: IM111012-10A1

Result Units: MG/L

Lab ID	Verification Type	Date Analyzed	Time Analyzed	Result	Reporting Limit	Flag
ICB	Initial Calibration	10/12/2011	12:23	0.00001	0.00001	U
CCB1	Continuing Calibration	10/12/2011	12:56	0.00001	0.00001	U
CCB2	Continuing Calibration	10/12/2011	13:25	0.00001	0.00001	U
CCB3	Continuing Calibration	10/12/2011	14:01	0.00001	0.00001	U
CCB4	Continuing Calibration	10/12/2011	14:30	0.00001	0.00001	U
CCB5	Continuing Calibration	10/12/2011	14:56	0.00001	0.00001	U
CCB6	Continuing Calibration	10/12/2011	15:24	0.00001	0.00001	U
CCB7	Continuing Calibration	10/12/2011	15:50	0.00001	0.00001	U
CCB8	Continuing Calibration	10/12/2011	16:18	0.00001	0.00001	U
CCB9	Continuing Calibration	10/12/2011	16:46	0.00001	0.00001	U

Data Package ID: IM1109363-1

Date Printed: Thursday, October 13, 2011

ALS Environmental -- FC  
LIMS Version: 6.536

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**ICPMS Metals**  
**Method SW6020**  
**ICP Interference Check Sample**

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Run ID: IM111012-10A1

Date Analyzed: 10/12/2011

Result Units: MG/L

CASNO	Target Analyte	Spike Added		Results		% Rec.
		ICSA1	ICSAB1	ICSA1	ICSAB1	
7440-61-1	URANIUM		0.001		0.00103	103

Data Package ID: IM1109363-1

Date Printed: Thursday, October 13, 2011

ALS Environmental -- FC

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# Metals Linear Ranges

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Instrument ID: ICPMS2

Active Date: 04/01/2010

Expiration Date: 04/01/2015

CASNO	Target Analyte	Concentration (ppm)
7429-90-5	ALUMINUM	50
7440-36-0	ANTIMONY	0.3
7440-38-2	ARSENIC	1
7440-39-3	BARIUM	1
7440-41-7	BERYLLIUM	0.5
7440-43-9	CADMIUM	0.3
7440-70-2	CALCIUM	500
7440-47-3	CHROMIUM	5
7440-48-4	COBALT	1
7440-50-8	COPPER	10
7439-89-6	IRON	50
7439-92-1	LEAD	0.5
7439-95-4	MAGNESIUM	100
7439-96-5	MANGANESE	2
7439-98-7	MOLYBDENUM	1
7440-02-0	NICKEL	5
7440-09-7	POTASSIUM	500
7782-49-2	SELENIUM	1
7440-22-4	SILVER	0.1
7440-23-5	SODIUM	1000
7440-28-0	THALLIUM	0.02
7440-31-5	TIN	5
7440-61-1	URANIUM	0.1
7440-62-2	VANADIUM	1
7440-66-6	ZINC	20



# ICPMS2 Run Log -- 10/12/2011

Instrument ID: ICPMS2

File Name: 003CALB.

AnalRunID: IM111012-10A1

CalibRefID: IM111012-10A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
		blank	1	10/12/2011	12:06
		H/1000	1	10/12/2011	12:08
		H/100	1	10/12/2011	12:10
		H/10	1	10/12/2011	12:13
		HIGH	1	10/12/2011	12:15
		ICV	1	10/12/2011	12:20
		ICB	1	10/12/2011	12:23
		CRI1	1	10/12/2011	12:25
		CRI2	1	10/12/2011	12:27
		ICSA1	1	10/12/2011	12:30
		ICSAB1	1	10/12/2011	12:32
		IP111010-3MB	10	10/12/2011	12:37
		IM111010-3	10	10/12/2011	12:40
		IM111010-3LCS	10	10/12/2011	12:42
		1110039-1	10	10/12/2011	12:44
		1110039-2	10	10/12/2011	12:47
		1110039-3	10	10/12/2011	12:49
		CCV1	1	10/12/2011	12:54
		CCB1	1	10/12/2011	12:56
		1110039-3DUP	10	10/12/2011	12:59
		1110039-3SER	50	10/12/2011	13:01
		1110039-3MS	10	10/12/2011	13:04
		1110039-3MSD	10	10/12/2011	13:06
		1110051-2	10	10/12/2011	13:08
		1110051-3	10	10/12/2011	13:11
		1110051-4	10	10/12/2011	13:13
		1110051-5	10	10/12/2011	13:15
		1110051-6	10	10/12/2011	13:18
		1110051-7	10	10/12/2011	13:20
		CCV2	1	10/12/2011	13:22
		CCB2	1	10/12/2011	13:25
		1110051-7DUP	10	10/12/2011	13:27
		1110051-7SER	50	10/12/2011	13:29
		1110051-7MS	10	10/12/2011	13:32
		1110051-7MSD	10	10/12/2011	13:34

Data Package ID: IM1109363-1

# ICPMS2 Run Log -- 10/12/2011

Instrument ID: ICPMS2

File Name: 036SMPL

AnalRunID: IM111012-10A1

CalibRefID: IM111012-10A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
		1110053-1	10	10/12/2011	13:36
		1110053-2	10	10/12/2011	13:39
- Sr		1110057-2	10	10/12/2011	13:41
As,Cd,Fe,Mn,Pb,Se,Th,U,Zn		1110057-2	10000	10/12/2011	13:57
		CCV3	1	10/12/2011	13:59
		CCB3	1	10/12/2011	14:01
		IP111011-4MB	10	10/12/2011	14:04
		IM111011-4	10	10/12/2011	14:06
		IM111011-4LCS	10	10/12/2011	14:08
		1110118-1	10	10/12/2011	14:11
		1110118-2	10	10/12/2011	14:13
		1110118-2DUP	10	10/12/2011	14:15
		1110118-2SER	50	10/12/2011	14:18
		1110118-2MS	10	10/12/2011	14:20
		1110118-2MSD	10	10/12/2011	14:22
		1110118-3	10	10/12/2011	14:25
		CCV4	1	10/12/2011	14:28
		CCB4	1	10/12/2011	14:30
		1110118-4	10	10/12/2011	14:32
		1110118-5	10	10/12/2011	14:35
		1110118-6	10	10/12/2011	14:37
		1110118-7	10	10/12/2011	14:39
		1110118-8	10	10/12/2011	14:42
		1110118-9	10	10/12/2011	14:44
		1110118-10	10	10/12/2011	14:46
		1110118-11	10	10/12/2011	14:49
		1110118-12	10	10/12/2011	14:51
		CCV5	1	10/12/2011	14:53
		CCB5	1	10/12/2011	14:56
		EX111010-5MB	10	10/12/2011	14:58
		EXM111010-5	10	10/12/2011	15:00
		EXM111010-5LCS	10	10/12/2011	15:03
		1109234-17	200	10/12/2011	15:05
		1109234-17DUP	200	10/12/2011	15:07
		1109234-17SER	1000	10/12/2011	15:10

Data Package ID: IM1109363-1

# ICPMS2 Run Log -- 10/12/2011

Instrument ID: ICPMS2

File Name: 033SMPL\_

AnalRunID: IM111012-10A1

CalibRefID: IM111012-10A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
		1109234-17MS	200	10/12/2011	15:12
		1109234-17MSD	200	10/12/2011	15:14
		1109234-18	200	10/12/2011	15:17
		1109235-16	200	10/12/2011	15:19
		CCV6	1	10/12/2011	15:21
		CCB6	1	10/12/2011	15:24
		1109235-17	200	10/12/2011	15:26
		1109302-11	200	10/12/2011	15:28
		1109303-20	200	10/12/2011	15:31
		1109303-21	200	10/12/2011	15:33
		1109304-22	200	10/12/2011	15:35
		1109304-23	200	10/12/2011	15:38
		1109305-21	200	10/12/2011	15:40
		1109305-22	200	10/12/2011	15:42
		1109306-21	200	10/12/2011	15:45
		CCV7	1	10/12/2011	15:47
		CCB7	1	10/12/2011	15:50
		IP111007-4MB	10	10/12/2011	15:52
		IM111007-4	10	10/12/2011	15:55
		IM111007-4LCS	10	10/12/2011	15:57
	AR-01-31-110928	1109363-1	100	10/12/2011	15:59
	AR-01-31-110928	1109363-1DUP	100	10/12/2011	16:02
	AR-01-31-110928	1109363-1SER	500	10/12/2011	16:04
	AR-01-31-110928	1109363-1MS	100	10/12/2011	16:06
	AR-01-31-110928	1109363-1MSD	100	10/12/2011	16:09
	JB-11-31-110928	1109363-2	100	10/12/2011	16:11
	JB-30-31-110928	1109363-3	10	10/12/2011	16:13
		CCV8	1	10/12/2011	16:16
		CCB8	1	10/12/2011	16:18
	JB-41-31-110928	1109363-4	10	10/12/2011	16:21
	JB-41-32-110928	1109363-5	10	10/12/2011	16:23
	JB-48-31-110928	1109363-6	10	10/12/2011	16:25
	JB-67-31-110928	1109363-7	10	10/12/2011	16:28
	JB-68-31-110928	1109363-8	10	10/12/2011	16:30
	JBBKGD-E-31-110928	1109363-9	10	10/12/2011	16:32

Data Package ID: IM1109363-1

# ICPMS2 Run Log -- 10/12/2011

Instrument ID: ICPMS2

File Name: 068SMPL\_

AnalRunID: IM111012-10A1

CalibRefID: IM111012-10A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
	JBBKGD-S-31-110928	1109363-10	10	10/12/2011	16:35
	JBBKGD-W-31-110928	1109363-11	10	10/12/2011	16:38
	VTP-01-31-110928	1109363-12	100	10/12/2011	16:41
		CCV9	1	10/12/2011	16:44
		CCB9	1	10/12/2011	16:46
		IP111010-7MB	10	10/12/2011	16:48
		IM111010-7	10	10/12/2011	16:51
		IM111010-7LCS	10	10/12/2011	16:53
		1110021-1	200	10/12/2011	16:55
		1110021-1DUP	200	10/12/2011	16:58
		1110021-1SER	1000	10/12/2011	17:00
		1110021-1MS	200	10/12/2011	17:05
		1110021-1MSD	200	10/12/2011	17:07
		1110021-2	200	10/12/2011	17:10
		1110021-3	200	10/12/2011	17:12
		CCV10	1	10/12/2011	17:19
		CCB10	1	10/12/2011	17:22
		1110021-4	200	10/12/2011	17:24
		1110021-5	200	10/12/2011	17:27
		1110021-6	200	10/12/2011	17:29
		1110021-7	200	10/12/2011	17:31
		1110021-8	200	10/12/2011	17:34
		1110021-9	200	10/12/2011	17:36
		1110021-10	200	10/12/2011	17:38
		1110021-11	200	10/12/2011	17:41
		1110021-12	200	10/12/2011	17:43
		1110021-13	200	10/12/2011	17:45
		CCV11	1	10/12/2011	17:53
		CCB11	1	10/12/2011	17:55
		1110021-14	200	10/12/2011	17:58
		1110021-15	200	10/12/2011	18:00
		1110021-16	200	10/12/2011	18:02
		1110021-17	200	10/12/2011	18:05
		1109308-21	200	10/12/2011	18:07
		1109326-1	200	10/12/2011	18:09

Data Package ID: IM1109363-1

# ICPMS2 Run Log -- 10/12/2011

Instrument ID: ICPMS2

File Name: 105SMPL\_

AnalRunID: IM111012-10A1

CalibRefID: IM111012-10A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
		1109326-2	200	10/12/2011	18:12
		1109326-3	200	10/12/2011	18:14
		CCV12	1	10/12/2011	18:34
		CCB12	1	10/12/2011	18:39
		IP111011-6MB	10	10/12/2011	18:42
		IM111011-6	10	10/12/2011	18:44
		IM111011-6LCS	10	10/12/2011	18:47
		1110049-1	10	10/12/2011	18:49
		1110049-1DUP	10	10/12/2011	18:51
		1110049-1SER	50	10/12/2011	18:54
		1110049-1MS	10	10/12/2011	18:56
		1110049-1MSD	10	10/12/2011	18:58
		1110049-3	10	10/12/2011	19:01
		ZZZZZZ	1	10/12/2011	19:03
		CCV13	1	10/12/2011	19:08
		CCB13	1	10/12/2011	19:11
		1110049-5	10	10/12/2011	19:13
		1110049-6	10	10/12/2011	19:15
		1110049-9	10	10/12/2011	19:18
		1110049-4	10	10/12/2011	19:20
		ZZZZZZ	1	10/12/2011	19:25
		CCV14	1	10/12/2011	19:30
		CCB14	1	10/12/2011	19:33

Data Package ID: IM1109363-1

# Mercury

## Method SW7471A

### Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: HG111010-2MB

Sample Matrix: SOIL

% Moisture: N/A

Date Collected: N/A

Date Extracted: 10-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: METHOD

Prep Batch: HG111010-1

QCBatchID: HG111010-1-2

Run ID: HG111010-2A1

Cleanup: NONE

Basis: N/A

File Name: HG111010-1

Sample Aliquot: 0.6 g

Final Volume: 100 g

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7439-97-6	MERCURY	1	0.033	0.033	U	

Data Package ID: HG1109363-1

Date Printed: Thursday, October 13, 2011

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**Mercury**  
**Method SW7471A**  
**Laboratory Control Sample**

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Lab ID: HG111010-2LCS

Sample Matrix: SOIL

% Moisture: N/A

Date Collected: N/A

Date Extracted: 10/10/2011

Date Analyzed: 10/10/2011

Prep Method: METHOD

Prep Batch: HG111010-1

QCBatchID: HG111010-1-2

Run ID: HG111010-2A1

Cleanup: NONE

Basis: N/A

File Name: HG111010-1

Sample Aliquot: 0.6 g

Final Volume: 100 g

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7439-97-6	MERCURY	0.167	0.165	0.0333		99	80 - 120%

Data Package ID: HG1109363-1

Date Printed: Thursday, October 13, 2011

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# Mercury

## Method SW7471A

### Matrix Spike And Matrix Spike Duplicate

**Lab Name:** ALS Environmental -- FC  
**Work Order Number:** 1109363  
**Client Name:** Weston Solutions, Inc.  
**ClientProject ID:** John Bully Mine TO 0035110603-110929-0002

**Field ID:** AR-01-31-110928  
**LabID:** 1109363-1MS

**Sample Matrix:** SOIL  
**% Moisture:** 5.3  
**Date Collected:** 28-Sep-11  
**Date Extracted:** 10-Oct-11  
**Date Analyzed:** 10-Oct-11  
**Prep Method:** METHOD

**Prep Batch:** HG111010-1  
**QCBatchID:** HG111010-1-2  
**Run ID:** HG111010-2A1  
**Cleanup:** NONE  
**Basis:** Dry Weight

**Sample Aliquot:** 0.613 g  
**Final Volume:** 100 g  
**Result Units:** MG/KG  
**File Name:** HG111010-1

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7439-97-6	MERCURY	0.046		0.381		0.0345	0.345	97	80 - 120%

**Field ID:** AR-01-31-110928  
**LabID:** 1109363-1MSD

**Sample Matrix:** SOIL  
**% Moisture:** 5.3  
**Date Collected:** 28-Sep-11  
**Date Extracted:** 10-Oct-11  
**Date Analyzed:** 10-Oct-11  
**Prep Method:** METHOD

**Prep Batch:** HG111010-1  
**QCBatchID:** HG111010-1-2  
**Run ID:** HG111010-2A1  
**Cleanup:** NONE  
**Basis:** Dry Weight

**Sample Aliquot:** 0.611 g  
**Final Volume:** 100 g  
**Result Units:** MG/KG  
**File Name:** HG111010-1

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7439-97-6	MERCURY	0.387		0.346	99	0.0346	20	2

**Data Package ID:** HG1109363-1



# Mercury

## Method SW7471

### Duplicate Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: AR-01-31-110928  
Lab ID: 1109363-1D

Sample Matrix: SOIL  
% Moisture: 5.3  
Date Collected: 09/28/2011  
Date Extracted: 10/10/2011  
Date Analyzed: 10/11/2011

Prep Batch: HG111010-1  
QCBatchID: HG111010-1-2  
Run ID: HG111010-2A1  
Cleanup: NONE  
Basis: Dry Weight  
File Name: HG111010-1

Sample Aliquot: 0.612 g  
Final Volume: 100 g  
Result Units: MG/KG  
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
7439-97-6	MERCURY	0.046		0.0432		0.0345	1		20

Data Package ID: HG1109363-1

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# Prep Batch ID: HG111010-1

Start Date: 10/10/11  
Start Time: 9:11  
Prep Analyst: Sheri Lafferty

End Date: 10/10/11  
End Time: 9:11

Concentration Method: NONE  
Extract Method: METHOD  
Initial Volume Units: g  
Final Volume Units: g

Batch Created By: skl  
Date Created: 10/10/11  
Time Created: 9:11  
Validated By: skl  
Date Validated: 10/10/11  
Time Validated: 12:15

## Comments:

QC Batch ID: HG111010-1-2

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
HG111010-2	MB	XXXXXX	SOIL	XXXXXX	0.6	100	NONE	1	1109363
HG111010-2	LCS	XXXXXX	SOIL	XXXXXX	0.6	100	NONE	1	1109363
1109363-1	MS	AR-01-31-110928	SOIL	9/28/2011	0.613	100	NONE	1	1109363
1109363-1	MSD	AR-01-31-110928	SOIL	9/28/2011	0.611	100	NONE	1	1109363
1109363-1	DUP	AR-01-31-110928	SOIL	9/28/2011	0.612	100	NONE	1	1109363
1109363-1	SMP	AR-01-31-110928	SOIL	9/28/2011	0.617	100	NONE	1	1109363
1109363-10	SMP	JBBKGD-S-31-11092	SOIL	9/28/2011	0.608	100	NONE	1	1109363
1109363-11	SMP	JBBKGD-W-31-11092	SOIL	9/28/2011	0.602	100	NONE	1	1109363
1109363-12	SMP	VTP-01-31-110928	SOIL	9/28/2011	0.609	100	NONE	1	1109363
1109363-2	SMP	JB-11-31-110928	SOIL	9/28/2011	0.6	100	NONE	1	1109363
1109363-3	SMP	JB-30-31-110928	SOIL	9/28/2011	0.616	100	NONE	1	1109363
1109363-4	SMP	JB-41-31-110928	SOIL	9/28/2011	0.603	100	NONE	1	1109363
1109363-5	SMP	JB-41-32-110928	SOIL	9/28/2011	0.603	100	NONE	1	1109363
1109363-6	SMP	JB-48-31-110928	SOIL	9/28/2011	0.615	100	NONE	1	1109363
1109363-7	SMP	JB-67-31-110928	SOIL	9/28/2011	0.615	100	NONE	1	1109363
1109363-8	SMP	JB-68-31-110928	SOIL	9/28/2011	0.608	100	NONE	1	1109363
1109363-9	SMP	JBBKGD-E-31-11092	SOIL	9/28/2011	0.611	100	NONE	1	1109363
1110077-4	SMP	XXXXXX	SOIL	XXXXXX	0.613	100	NONE	1	1110077
1110077-5	SMP	XXXXXX	SOIL	XXXXXX	0.604	100	NONE	1	1110077

## QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicat
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standar	SMP	Field Sample
SYS	Sample Yield Spike		

**MERCURY**  
**Method SW7471**  
**Calibration Verifications**

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Run ID: HG111010-2A1

Result Units: MG/L

Lab ID	Verification Type	Date Analyzed	Time Analyzed	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
ICV	Initial Calibration	10/11/2011	14:36	0.001	0.00105	0.0002	N/A	105	90 - 110
CCV1	Continuing Calibration	10/11/2011	15:02	0.002	0.00205	0.0002	N/A	102	80 - 120
CCV2	Continuing Calibration	10/11/2011	15:27	0.002	0.00205	0.0002	N/A	102	80 - 120
CCV3	Continuing Calibration	10/11/2011	15:53	0.002	0.00206	0.0002	N/A	103	80 - 120
CCV4	Continuing Calibration	10/11/2011	16:27	0.002	0.00204	0.0002	N/A	102	80 - 120
CCV5	Continuing Calibration	10/11/2011	16:35	0.002	0.00204	0.0002	N/A	102	80 - 120

Data Package ID: HG1109363-1

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**MERCURY**  
**Method SW7471**  
**Calibration Blanks**

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Run ID: HG111010-2A1

Result Units: MG/L

Lab ID	Verification Type	Date Analyzed	Time Analyzed	Result	Reporting Limit	Flag
ICB	Initial Calibration	10/11/2011	14:38	0.0002	0.0002	U
CCB1	Continuing Calibration	10/11/2011	15:04	0.0002	0.0002	U
CCB2	Continuing Calibration	10/11/2011	15:30	0.0002	0.0002	U
CCB3	Continuing Calibration	10/11/2011	15:56	0.0002	0.0002	U
CCB4	Continuing Calibration	10/11/2011	16:29	0.0002	0.0002	U
CCB5	Continuing Calibration	10/11/2011	16:38	0.0002	0.0002	U

Data Package ID: HG1109363-1

Date Printed: Thursday, October 13, 2011

ALS Environmental -- FC

LIMS Version: 6.536

Page 1 of 1

# Metals Linear Ranges

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

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Instrument ID: CETAC7500

Active Date: 07/19/2010

Expiration Date: 10/17/2020

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CASNO	Target Analyte	Concentration (ppm)
7439-97-6	MERCURY	0.01

# Mercury Run Log -- 10/10/2011

Instrument ID: CETAC7500

File Name: HG111010-1

AnalRunID: HG111010-2A1

CalibRefID: HG111010-2A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
		STD0	1	10/10/2011	14:21
		STD1	1	10/10/2011	14:23
		STD2	1	10/10/2011	14:25
		STD3	1	10/10/2011	14:27
		STD4	1	10/10/2011	14:29
		STD5	1	10/10/2011	14:32
		STD6	1	10/10/2011	14:34
		ICV	1	10/10/2011	14:36
		ICB	1	10/10/2011	14:38
		CRA1	1	10/10/2011	14:40
		HG111010-1MB	1	10/10/2011	14:42
		HG111010-1LCS	1	10/10/2011	14:44
		HG111010-2MB	1	10/10/2011	14:47
		HG111010-2LCS	1	10/10/2011	14:49
		1109362-1	1	10/10/2011	14:51
		1109362-1DUP	1	10/10/2011	14:53
		1109362-1L	5	10/10/2011	14:55
		1109362-1MS	1	10/10/2011	14:57
		1109362-1MSD	1	10/10/2011	14:59
		CCV1	1	10/10/2011	15:02
		CCB1	1	10/10/2011	15:04
		1109362-2	1	10/10/2011	15:06
		1109362-3	1	10/10/2011	15:08
		1109362-4	1	10/10/2011	15:10
		1109362-5	1	10/10/2011	15:12
		1109362-6	1	10/10/2011	15:14
		1109362-7	1	10/10/2011	15:17
		1109362-8	1	10/10/2011	15:19
		1109362-9	1	10/10/2011	15:21
		1109362-10	1	10/10/2011	15:23
		1109362-11	1	10/10/2011	15:25
		CCV2	1	10/10/2011	15:27
		CCB2	1	10/10/2011	15:30
		1109362-12	1	10/10/2011	15:32
		1109362-13	1	10/10/2011	15:34

Data Package ID: HG1109363-1

# Mercury Run Log -- 10/10/2011

Instrument ID: CETAC7500

File Name: HG111010-1

AnalRunID: HG111010-2A1

CalibRefID: HG111010-2A1

Comment	Field ID	Lab ID	DF	Date Analyzed	Time Analyzed
		1109362-14	1	10/10/2011	15:36
	AR-01-31-110928	1109363-1	1	10/10/2011	15:38
	AR-01-31-110928	1109363-1DUP	1	10/10/2011	15:40
	AR-01-31-110928	1109363-1MS	1	10/10/2011	15:43
	AR-01-31-110928	1109363-1MSD	1	10/10/2011	15:45
	JB-11-31-110928	1109363-2	1	10/10/2011	15:47
	JB-30-31-110928	1109363-3	1	10/10/2011	15:49
	JB-41-31-110928	1109363-4	1	10/10/2011	15:51
		CCV3	1	10/10/2011	15:53
		CCB3	1	10/10/2011	15:56
	JB-41-32-110928	1109363-5	1	10/10/2011	15:58
	JB-48-31-110928	1109363-6	1	10/10/2011	16:00
	JB-67-31-110928	1109363-7	1	10/10/2011	16:10
	JB-68-31-110928	1109363-8	1	10/10/2011	16:12
	JBBKGD-E-31-110928	1109363-9	1	10/10/2011	16:14
	JBBKGD-S-31-110928	1109363-10	1	10/10/2011	16:16
	JBBKGD-W-31-110928	1109363-11	1	10/10/2011	16:18
	VTP-01-31-110928	1109363-12	1	10/10/2011	16:20
		1110077-4	1	10/10/2011	16:23
		1110077-5	1	10/10/2011	16:25
		CCV4	1	10/10/2011	16:27
		CCB4	1	10/10/2011	16:29
		1109363-1L	5	10/10/2011	16:31
		CRA2	1	10/10/2011	16:33
		CCV5	1	10/10/2011	16:35
		CCB5	1	10/10/2011	16:38

Data Package ID: HG1109363-1



## Raw Data



# HEADER INFORMATION FOR ANALYTICAL SEQUENCE 111010A

Analyst: Michael Lundgreen

## STANDARD SOLUTION CODES

Stock A (ST110701-1) Exp.6-30-2012		
<u>Element</u>		<u>ug/ml</u>
Al, Ca, Mg		1000
K		500
Na		300
Fe		400
Li		20
<u>Standard</u>	<u>Dilution</u>	<u>Procedure</u>
A1	1/2 of Stock A	5ml of Stock A to 10ml final volume.
A2	1/2.5 of Stock A	2ml of Stock A to a 5ml final volume.
A3	1/5 of Stock A	1ml of Stock A to a 5ml final volume.
A4	1/10 of A1	1ml of Standard A1 up to a 10ml final volume.
A5	1/10 of A4	1ml of Standard A4 up to a 10ml final volume.

Stock B (ST100625-8) Exp. 2-28-15		
<u>Element</u>		<u>ug/ml</u>
P, Si		100
B, Ba, Cr, Cu, Mn, Mo, Ni, Pb, Sn, Sr, Ti ,Zn		20
As, Cd, Co, Se, Tl, V		10
Sb		4
Be		2

Stock Ag- 1000 ug/ml (ST100407-4) Exp. 2-28-15  
Stock Th – 1000 ug/ml (ST100407-5) Exp. 2-28-15

The following dilutions of Stock Ag and Stock Th are made to provide the daily calibration Standards.

<u>Standard</u>	<u>Dilution</u>	<u>Procedure</u>
B1	1/2 of Stock B	5ml of Stock B, 0.02ml of Stock Ag and 0.02ml of Stock Th up to a 10ml final volume.
B2	1/10 of B1	1.0ml of Standard B1 up to a 10ml final volume.
B3	1/10 of B2	1.0ml of Standard B2 up to a 10ml final volume.

Stock C (ST100625-9) Exp. 6-30-15		
<u>Element</u>		<u>ug/ml</u>
S, U		100
Bi, Zr		10
<u>Standard</u>	<u>Dilution</u>	<u>Procedure</u>
C1	1/2 of Stock C	5ml of Stock C up to a 10ml final volume.
C2	1/10 of C1	1.0ml of Standard C1 up to a 10ml final volume.
C3	1/10 of C2	1.0ml of Standard C2 up to a 10ml final volume.

RL STD (Reporting Limit Standard) Intermediate.  
(ST100301-54) Exp. 2-28-15

<u>Element</u>	<u>ug/ml</u>
K, Na	500
Ca, Mg	200
Al, U	100
B, Fe, P, S, Si	50
Li, Mo, Sn, Sr, Ti	10
Sb	8
Ni, As, Bi, Se, Tl, Zn, Zr	5
Pb	3
Ag, Ba, Co, Cr, Cu, Mn, V, Th	2
Be, Cd	1

RL STD (working standard) made daily by diluting the intermediate above 1000 fold. This working standard has concentration levels at the normal ALS-FC reporting limits for all elements except Ca, Mg and Na, K which are at 0.2ppm and 0.5ppm; this is below the normal ALS-FC reporting limit.

RL2 (working standard) made daily by diluting the intermediate above 333 fold.

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Blank Solution

Double D.I. water, 3% HNO<sub>3</sub> and 5%HCl  
Used for Std. Blank, ICB and CCB

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CCV (ST110818-5) Exp. 6-20-12

<u>Element</u>	<u>ug/ml</u>
Al, Ca, Mg, K, Na	50
Fe	20
U, P, S, Si	5
B, Ba, Cr, Cu, Mn, Mo, Ni, Pb, Se, Sn, Zn, Zr	1
As, Be, Bi, Cd, Co, Li, Sb, Sr, Ti, Tl, V	0.5
Ag, Th	0.2

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ICV (ST110815-5) Exp. 6-20-12

Prepared daily by diluting the CCV (described above) 1/2.  
The 1/2 dilution is made by diluting 5ml of the CCV to a 10ml final volume.  
The resulting concentrations are:

<u>Element</u>	<u>ug/ml</u>
Al, Ca, Mg, K, Na	25
Fe	10
U, P, S, Si	2.5
B, Ba, Cr, Cu, Mn, Mo, Ni, Pb, Se, Sn, Zn, Zr	0.5
As, Be, Bi, Cd, Co, Li, Sb, Sr, Ti, Tl, V	0.25
Ag, Th	0.1

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CRI (ST110105-13) Exp. 6-20-12

Made By diluting  
1.0ml of CRI Stock (ST110105-4) Exp. 6-20-12  
to a 100ml final volume.

<u>Element</u>	<u>ug/ml</u>
Ca, Mg, K, Na	5.0
Al, B, Ba	0.4
Fe, U, P, S	0.2
Sb	0.12
Co, Si, Sn, V, Th	0.1
Ni	0.08
Cu, Bi, Zr	0.05
Zn	0.04
Mn	0.03
Ag, Cr, Li, Mo, Sr, Ti, Tl	0.02
Be, Cd, As, Se,	0.01
Pb	0.006

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ICSA (ST110105-7) Exp. 6-20-12

<u>Element</u>	<u>ug/ml</u>
Ca, Mg, Al	250
Fe	100

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ICSAB (ST110105-8) Exp. 6-20-12

<u>Element</u>	<u>ug/ml</u>
Ca, Mg, Al	250
Fe	100
U	10

Sb	0.6
Ba, Be, Co, V, Cr, Cu, Mn, Bi, Zr	0.5
Ag	0.2
As, Tl	0.1
Se, Pb, Th	0.05

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Pipette ID Numbers

1.0ml to 5.0ml --- M-55  
0.1ml to 1.0ml --- M-61  
0.01ml to 0.1ml --- M-57

Acid Lot Numbers

HCl – J35042  
HNO<sub>3</sub> – J41037

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Inter Element Correction Information

The following table summarizes spectral interferences that have been identified and for which IEC's are used. If a sample contains a concentration of an interfering element that exceeds the upper analytical range, and an affected element is being determined, it is necessary to dilute the sample to bring the interfering element into analytical range.

<u>Interfering Element (ug/ml)</u>	<u>Affected Element</u>
Al (500)	Pb
Mg (500)	Th
Fe (200)	Se, Tl, V, Pb, U
Si (50)	Zr
U (50)	Al, Cr, Cu, Bi, Pb, Mg, Se, Ag, Tl, Si
Ba (10)	Co
Cr (10)	Sb
Cu (10)	Bi
Mn (10)	Tl
Mo (10)	Al, Si, Pb,, Sb
Ti (10)	Co, Bi, Si, Sn, Tl, Pb, Zr
As (5)	Cd
V (5)	Al, Be, Tl
Zr (5)	Ag

The following table lists element concentrations (ug/ml) that no significant spectral interferences have been observed.

<u>Element</u>	<u>Concentration</u>	<u>Element</u>	<u>Concentration</u>	<u>Element</u>	<u>Concentration</u>
K	500	Se	10	Li	5
Na	500	Pb	10	Cd	5
Ca	500	Zn	10	Co	5
P	50	Sr	10	Ag	2
S	50	Sn	10	Sb	2
Ni	10	Bi	5	Be	1
B	10	Tl	5		

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2X – Dilution made by diluting 2.5ml of sample up to a 5ml final volume.  
3X - Dilution made by diluting 2.0ml of sample up to a 6ml final volume.  
4X - Dilution made by diluting 2.0ml of sample up to a 8ml final volume.  
5X - Dilution made by diluting 1.0ml of sample to a 5ml final volume.  
10X - Dilution made by diluting 0.5ml of sample to a 5ml final volume.  
20X – Dilution made by diluting 0.25ml of sample to a 5ml final volume.  
25X – Dilution made by diluting 0.2ml of sample to a 5ml final volume.

100X – Dilution made by diluting 0.05ml of sample to a 5ml final volume.  
500X – Dilution made by diluting 0.02ml of sample to a 10ml final volume.  
1000X – Dilution made by diluting a 10X dilution 100X.

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#### Analytical Spikes

1109372-1 was post spiked at a ten fold dilution for S by spiking 0.01mL ST101229-40 onto 4.49mL millq water and 0.5mL sample, 5.0mL final volume.

1109301-1 was post spiked for Ba, Ca, Co, As, Cu, Mo, Sb and Zn by spiking 0.1mL ST110916-7 and 0.1mL ST110902-3 onto 4.8mL sample, 5.0mL final volume.

1109301-1 was post spiked at a ten fold dilution for V by spiking 0.1mL ST110916-7 onto 4.4mL millq water and 0.5mL sample, 5.0mL final volume.

1109363-1 was post spike for Sb and V by spiking 0.1mL ST110916-7 onto 4.9mL sample, 5.0mL final volume.

1109362-1 was post spike for Sb and V by spiking 0.1mL ST110916-7 onto 4.9mL sample, 5.0mL final volume.

#### Comments

1. Please see run log and work orders for elements of interest.

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#### Daily Maintenance

1. Check/ Change Peristaltic pump tubing.
2. Check the torch for deposits, clean if necessary.
3. Check/ Empty drain water.

Daily Maintenance done by MTL.

#### Monthly Maintenance

1. Check/Clean nebulizer and spray chamber.
2. Clean air filters
3. Check/Clean entrance slit.
4. Fill water recirculating reservoir.

Monthly maintenance done by: MTL 09-29-2011.

Major problems / adjustments / repairs recorded in the ICP Maintenance Log (3716).

# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2  
 File Name: 111010A.  
 AnalRunID: IT111010-2A1  
 CalibRefID: IT111010-2A1

Comment	Inst Sample Name	Lab ID	DF	Date Analyzed	Time Analyzed
	MIXBHGH	MIXBHGH	1	10/10/2011	11:53
	MIXAHGH	MIXAHGH	1	10/10/2011	11:55
	MIXCHGH	MIXCHGH	1	10/10/2011	11:57
	ICV	ICV	1	10/10/2011	12:29
	ICB	ICB	1	10/10/2011	12:31
	CRI	CRI1	1	10/10/2011	12:33
	ICSA	ICSA1	1	10/10/2011	12:34
	ICSAB	ICSAB1	1	10/10/2011	12:36
	CCV	CCV1	1	10/10/2011	12:38
	CCB	CCB1	1	10/10/2011	12:42
	F111006-1MB	F111006-1MB	1	10/10/2011	12:44
	F111006-1RVS	F111006-1	1	10/10/2011	12:46
	F111006-1LCS	F111006-1LCS	1	10/10/2011	12:47
	1109351-1	1109351-1	1	10/10/2011	12:49
	1109351-2	1109351-2	1	10/10/2011	12:51
	1109351-4	1109351-4	1	10/10/2011	12:53
	1109351-5	1109351-5	1	10/10/2011	12:55
	1109381-1	1109381-1	1	10/10/2011	12:56
	1109381-1D	1109381-1DUP	1	10/10/2011	12:58
	1109381-1L 5X	1109381-1SER	5	10/10/2011	13:00
	CCV	CCV2	1	10/10/2011	13:04
	CCB	CCB2	1	10/10/2011	13:06
	1109381-1MS	1109381-1MS	1	10/10/2011	13:08
	1109381-1MSD	1109381-1MSD	1	10/10/2011	13:10
	1109382-1	1109382-1	1	10/10/2011	13:11
	1109382-2	1109382-2	1	10/10/2011	13:13
	1109382-4	1109382-4	1	10/10/2011	13:15
	1109382-5	1109382-5	1	10/10/2011	13:17
	1110028-10	1110028-10	1	10/10/2011	13:19
	1110028-11	1110028-11	1	10/10/2011	13:20
- Na	1110028-12	1110028-12	1	10/10/2011	13:22
- Na	1110028-13	1110028-13	1	10/10/2011	13:24
	CCV	CCV3	1	10/10/2011	13:28
	CCB	CCB3	1	10/10/2011	13:30
	1110028-14	1110028-14	1	10/10/2011	13:32

Data Package ID:

# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2

File Name: 111010A.

AnalRunID: IT111010-2A1

CalibRefID: IT111010-2A1

Comment	Inst Sample Name	Lab ID	DF	Date Analyzed	Time Analyzed
	1110028-15	1110028-15	1	10/10/2011	13:33
	1110035-9	1110035-9	1	10/10/2011	13:35
	1110035-10	1110035-10	1	10/10/2011	13:37
-Na	1110035-11	1110035-11	1	10/10/2011	13:39
	1110035-12	1110035-12	1	10/10/2011	13:41
	IP111007-2MB	IP111007-2MB	1	10/10/2011	13:45
	ZZZ	ZZZ	1	10/10/2011	13:46
	IP111007-2LCS	IP111007-2LCS	1	10/10/2011	13:48
	IP111007-2LCSD	IP111007-2LCSD	1	10/10/2011	13:50
	CCV	CCV4	1	10/10/2011	13:53
	CCB	CCB4	1	10/10/2011	13:55
-S	1109372-1	1109372-1	1	10/10/2011	13:57
-S	1109372-1D	1109372-1DUP	1	10/10/2011	13:59
-S	1109372-1L 5X	1109372-1SER	5	10/10/2011	14:01
+B,Fe,P,Si,Sr,Ti	1109372-1A	1109372-1A	1	10/10/2011	14:03
-S	1109372-2	1109372-2	1	10/10/2011	14:05
-S	1109372-3	1109372-3	1	10/10/2011	14:07
-S	1109372-4	1109372-4	1	10/10/2011	14:08
-S	1109372-5	1109372-5	1	10/10/2011	14:10
-S	1109372-6	1109372-6	1	10/10/2011	14:12
	1110028-1	1110028-1	1	10/10/2011	14:14
	CCV	CCV5	1	10/10/2011	14:18
	CCB	CCB5	1	10/10/2011	14:20
	1110028-2	1110028-2	1	10/10/2011	14:21
-Na	1110028-4	1110028-4	1	10/10/2011	14:23
-Na	1110028-5	1110028-5	1	10/10/2011	14:25
	1110028-7	1110028-7	1	10/10/2011	14:27
	1110028-8	1110028-8	1	10/10/2011	14:29
	1110035-1	1110035-1	1	10/10/2011	14:31
	1110035-4	1110035-4	1	10/10/2011	14:32
-Na	1110035-5	1110035-5	1	10/10/2011	14:34
	1110035-7	1110035-7	1	10/10/2011	14:36
	IP111007-4MB	IP111007-4MB	1	10/10/2011	14:40
	CCV	CCV6	1	10/10/2011	14:42
	CCB	CCB6	1	10/10/2011	14:44

Data Package ID:

# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2

File Name: 111010A.

AnalRunID: IT111010-2A1

CalibRefID: IT111010-2A1

Comment	Inst Sample Name	Lab ID	DF	Date Analyzed	Time Analyzed
	IP111007-4RVS	IP111007-4	1	10/10/2011	14:51
	IP111007-4LCS	IP111007-4LCS	1	10/10/2011	14:53
	IP111007-4LCSD	IP111007-4LCSD	1	10/10/2011	14:55
- Fe,Mn,Pb,Se,Ti,U,V	1109301-1	1109301-1	1	10/10/2011	14:56
- Fe,Mn,Pb,Se,Ti,U,V	1109301-1D	1109301-1DUP	1	10/10/2011	14:58
- Fe,Mn,Pb,Se,Ti,U,V	1109301-1L 5X	1109301-1SER	5	10/10/2011	15:00
- Fe,Mn,Pb,Se,Ti,U,V	1109301-1MS	1109301-1MS	1	10/10/2011	15:02
- Fe,Mn,Pb,Se,Ti,U,V	1109301-1MSD	1109301-1MSD	1	10/10/2011	15:04
	ZZZ	ZZZ	1	10/10/2011	15:06
	ZZZ	ZZZ	1	10/10/2011	15:08
	CCV	CCV7	1	10/10/2011	15:11
	CCB	CCB7	1	10/10/2011	15:13
	ZZZ	ZZZ	1	10/10/2011	15:15
	ZZZ	ZZZ	1	10/10/2011	15:17
	ZZZ	ZZZ	1	10/10/2011	15:26
	ZZZ	ZZZ	1	10/10/2011	15:28
	CCV	CCV8	1	10/10/2011	15:37
	CCB	CCB8	1	10/10/2011	15:39
	1109363-1	1109363-1	1	10/10/2011	15:41
	1109363-1D	1109363-1DUP	1	10/10/2011	15:43
	1109363-1L 5X	1109363-1SER	5	10/10/2011	15:45
	1109363-1MS	1109363-1MS	1	10/10/2011	15:47
	1109363-1MSD	1109363-1MSD	1	10/10/2011	15:48
	CCV	CCV9	1	10/10/2011	15:50
	CCB	CCB9	1	10/10/2011	15:52
	1109363-2	1109363-2	1	10/10/2011	15:54
	1109363-3	1109363-3	1	10/10/2011	15:56
	1109363-4	1109363-4	1	10/10/2011	15:58
	1109363-5	1109363-5	1	10/10/2011	16:00
	1109363-6	1109363-6	1	10/10/2011	16:02
	1109363-7	1109363-7	1	10/10/2011	16:04
	1109363-8	1109363-8	1	10/10/2011	16:05
	CCV	CCV10	1	10/10/2011	16:08
	CCB	CCB10	1	10/10/2011	16:10
	1109363-9	1109363-9	1	10/10/2011	16:13

Data Package ID:

# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2

File Name: 111010A.

AnalRunID: IT111010-2A1

CalibRefID: IT111010-2A1

Comment	Inst Sample Name	Lab ID	DF	Date Analyzed	Time Analyzed
	1109363-10	1109363-10	1	10/10/2011	16:14
	1109363-11	1109363-11	1	10/10/2011	16:16
- Fe,Pb,Se,Tl,U,V	1109363-12	1109363-12	1	10/10/2011	16:18
	IP111007-5MB	IP111007-5MB	1	10/10/2011	16:20
	IP111007-5RVS	IP111007-5	1	10/10/2011	16:22
	IP111007-5LCS	IP111007-5LCS	1	10/10/2011	16:28
	1109362-1	1109362-1	1	10/10/2011	16:30
	1109362-1D	1109362-1DUP	1	10/10/2011	16:32
	1109362-1L 5X	1109362-1SER	5	10/10/2011	16:34
	CCV	CCV11	1	10/10/2011	16:37
	CCB	CCB11	1	10/10/2011	16:39
	1109362-1MS	1109362-1MS	1	10/10/2011	16:41
	1109362-1MSD	1109362-1MSD	1	10/10/2011	16:43
	1109362-2	1109362-2	1	10/10/2011	16:44
	1109362-3	1109362-3	1	10/10/2011	16:46
	1109362-4	1109362-4	1	10/10/2011	16:48
	1109362-5	1109362-5	1	10/10/2011	16:50
	1109362-6	1109362-6	1	10/10/2011	16:52
	1109362-7	1109362-7	1	10/10/2011	16:54
	1109362-8	1109362-8	1	10/10/2011	16:56
	1109362-9	1109362-9	1	10/10/2011	16:58
	CCV	CCV12	1	10/10/2011	17:00
	CCB	CCB12	1	10/10/2011	17:02
	1109362-10	1109362-10	1	10/10/2011	17:04
	1109362-11	1109362-11	1	10/10/2011	17:06
	1109362-12	1109362-12	1	10/10/2011	17:08
	1109362-13	1109362-13	1	10/10/2011	17:10
	1109362-14	1109362-14	1	10/10/2011	17:12
	IP111007-3MB	IP111007-3MB	1	10/10/2011	17:15
	IP111007-3RVS	IP111007-3	1	10/10/2011	17:16
	IP111007-3LCS	IP111007-3LCS	1	10/10/2011	17:18
	1110025-1 10X	1110025-1	10	10/10/2011	17:20
	1110025-1D 10X	1110025-1DUP	10	10/10/2011	17:23
	CCV	CCV13	1	10/10/2011	17:25
	CCB	CCB13	1	10/10/2011	17:27

Data Package ID:



# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2  
 File Name: 111010A.  
 AnalRunID: IT111010-2A1  
 CalibRefID: IT111010-2A1

Comment	Inst Sample Name	Lab ID	DF	Date Analyzed	Time Analyzed
	1110025-1L 50X	1110025-1SER	50	10/10/2011	17:29
	1110025-1MS 10X	1110025-1MS	10	10/10/2011	17:30
	1110025-1MSD 10X	1110025-1MSD	10	10/10/2011	17:32
	1110025-2 5X	1110025-2	5	10/10/2011	17:34
	1110025-3 5X	1110025-3	5	10/10/2011	17:36
	1110025-4 5X	1110025-4	5	10/10/2011	17:38
	1110025-5 5X	1110025-5	5	10/10/2011	17:40
	1110025-6 5X	1110025-6	5	10/10/2011	17:42
	1110025-7 5X	1110025-7	5	10/10/2011	17:44
	1110025-8 5X	1110025-8	5	10/10/2011	17:45
	CCV	CCV14	1	10/10/2011	17:47
	CCB	CCB14	1	10/10/2011	17:49
	1110025-9 5X	1110025-9	5	10/10/2011	17:51
	1110025-10 5X	1110025-10	5	10/10/2011	17:53
	1110025-11 5X	1110025-11	5	10/10/2011	17:55
	1110025-12 5X	1110025-12	5	10/10/2011	17:57
	1110025-13 5X	1110025-13	5	10/10/2011	17:59
	1110025-14 5X	1110025-14	5	10/10/2011	18:01
	IP111010-2MB	IP111010-2MB	1	10/10/2011	18:03
	IP111010-2RVS	IP111010-2	1	10/10/2011	18:04
	IP111010-2LCS	IP111010-2LCS	1	10/10/2011	18:06
- S	1110088-1 2X	1110088-1	2	10/10/2011	18:08
	CCV	CCV15	1	10/10/2011	18:10
	CCB	CCB15	1	10/10/2011	18:12
- S	1110088-1D 2X	1110088-1DUP	2	10/10/2011	18:14
- S	1110088-1L 10X	1110088-1SER	10	10/10/2011	18:16
- S	1110088-1MS 2X	1110088-1MS	2	10/10/2011	18:18
- S	1110088-1MSD 2X	1110088-1MSD	2	10/10/2011	18:20
- S	1110088-2 2X	1110088-2	2	10/10/2011	18:22
- S	1110088-3 2X	1110088-3	2	10/10/2011	18:23
+ Ca	1110088-4 2X	1110088-4	2	10/10/2011	18:25
+ Ca	1110088-5 2X	1110088-5	2	10/10/2011	18:27
- S	1110088-6 2X	1110088-6	2	10/10/2011	18:29
- S	1110088-7 2X	1110088-7	2	10/10/2011	18:31
	CCV	CCV16	1	10/10/2011	18:33

Data Package ID:

# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2  
 File Name: 111010A.  
 AnalRunID: IT111010-2A1  
 CalibRefID: IT111010-2A1

Comment	Inst Sample Name	Lab ID	DF	Date Analyzed	Time Analyzed
	CCB	CCB16	1	10/10/2011	18:35
-S	1110088-8 2X	1110088-8	2	10/10/2011	18:37
-S	1110088-9 2X	1110088-9	2	10/10/2011	18:39
-S	1110088-10 2X	1110088-10	2	10/10/2011	18:41
-S	1110088-11 2X	1110088-11	2	10/10/2011	18:43
-S	1110088-12 2X	1110088-12	2	10/10/2011	18:44
	1110088-13 5X	1110088-13	5	10/10/2011	18:46
	1110088-14 5X	1110088-14	5	10/10/2011	18:48
-S	1110088-15 2X	1110088-15	2	10/10/2011	18:50
-S	1110088-16 2X	1110088-16	2	10/10/2011	18:52
-S	1110088-17 2X	1110088-17	2	10/10/2011	18:54
	CCV	CCV17	1	10/10/2011	18:56
	CCB	CCB17	1	10/10/2011	18:58
+ Ca	1110088-18 2X	1110088-18	2	10/10/2011	19:00
+ Ca	1110088-19 2X	1110088-19	2	10/10/2011	19:02
+ Ca	1110088-20 2X	1110088-20	2	10/10/2011	19:04
	IP111010-3MB	IP111010-3MB	1	10/10/2011	19:05
	IP111010-3RVS	IP111010-3	1	10/10/2011	19:07
	IP111010-3LCS	IP111010-3LCS	1	10/10/2011	19:09
-S	1110039-1	1110039-1	1	10/10/2011	19:11
	1110039-2	1110039-2	1	10/10/2011	19:13
	1110039-3	1110039-3	1	10/10/2011	19:15
	1110039-3D	1110039-3DUP	1	10/10/2011	19:17
	CCV	CCV18	1	10/10/2011	19:19
	CCB	CCB18	1	10/10/2011	19:21
	1110039-3L 5X	1110039-3SER	5	10/10/2011	19:23
	1110039-3MS	1110039-3MS	1	10/10/2011	19:24
	1110039-3MSD	1110039-3MSD	1	10/10/2011	19:26
	1110053-1	1110053-1	1	10/10/2011	19:28
	1110053-2	1110053-2	1	10/10/2011	19:33
-S	1110088-21 2X	1110088-21	2	10/10/2011	19:35
-S	1110088-22 2X	1110088-22	2	10/10/2011	19:37
-S	1110088-23 2X	1110088-23	2	10/10/2011	19:39
-S	1110088-24 2X	1110088-24	2	10/10/2011	19:41
-S	1110088-25 2X	1110088-25	2	10/10/2011	19:43

Data Package ID:

# ICPTrace2 Run Log -- 10/10/2011

Instrument ID: ICPTrace2  
 File Name: 111010A.  
 AnalRunID: IT111010-2A1  
 CalibRefID: IT111010-2A1

Comment	Inst Sample Name	Lab ID	DF	Date Analyzed	Time Analyzed
	CCV	CCV19	1	10/10/2011	19:45
	CCB	CCB19	1	10/10/2011	19:47
+ Ca	1110088-26 2X	1110088-26	2	10/10/2011	19:49
	1110088-27 5X	1110088-27	5	10/10/2011	19:51
	1110088-28 5X	1110088-28	5	10/10/2011	19:53
+ S	1109372-1 10X	1109372-1	10	10/10/2011	19:55
+ S	1109372-1D 10X	1109372-1DUP	10	10/10/2011	19:56
+ S	1109372-1L 50X	1109372-1SER	50	10/10/2011	19:58
+ S	1109372-1A 10X	1109372-1A	10	10/10/2011	20:00
+ Fe,Mn,Pb,Se,Ti,U,V	1109301-1 10X	1109301-1	10	10/10/2011	20:03
+ Fe,Mn,Pb,Se,Ti,U,V	1109301-1D 10X	1109301-1DUP	10	10/10/2011	20:05
+ Fe,Mn,Pb,Se,Ti,U,V	1109301-1L 50X	1109301-1SER	50	10/10/2011	20:06
	CCV	CCV20	1	10/10/2011	20:08
	CCB	CCB20	1	10/10/2011	20:10
+ Fe,Mn,Pb,Se,Ti,U,V	1109301-1MS 10X	1109301-1MS	10	10/10/2011	20:12
+ Fe,Mn,Pb,Se,Ti,U,V	1109301-1MSD 10X	1109301-1MSD	10	10/10/2011	20:14
+ As,Ba,Ca,Co,Cu,Mo,Sb,Ti,Zn	1109301-1A	1109301-1A	1	10/10/2011	20:16
+ Sb,V	1109363-1A	1109363-1A	1	10/10/2011	20:18
+ Fe,Pb,Se,Ti,U,V	1109363-12 5X	1109363-12	5	10/10/2011	20:20
+ Sb,V	1109362-1A	1109362-1A	1	10/10/2011	20:22
- Ca,S	1110088-4	1110088-4	1	10/10/2011	20:23
- Ca,S	1110088-5	1110088-5	1	10/10/2011	20:25
- Ca,S	1110088-18	1110088-18	1	10/10/2011	20:27
- Ca,S	1110088-19	1110088-19	1	10/10/2011	20:29
	CCV	CCV21	1	10/10/2011	20:31
	CCB	CCB21	1	10/10/2011	20:33
- Ca,S	1110088-20	1110088-20	1	10/10/2011	20:35
- Ca,S	1110088-26	1110088-26	1	10/10/2011	20:37
+ V	1109301-1A 10X	1109301-1A	10	10/10/2011	20:39
	CRI	CRI2	1	10/10/2011	20:41
	ICSA	ICSA2	1	10/10/2011	20:43
	ICSAB	ICSAB2	1	10/10/2011	20:45
	CCV	CCV22	1	10/10/2011	20:47
	CCB	CCB22	1	10/10/2011	20:49

Data Package ID:

Sample Id1	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu
MIXBHGH	H2.00303	0.05854	H5.00324	9.95289	9.93719	0.97949	0.00834	-0.02831	4.97319	4.94706	9.86433	H10.07088
MIXAHGH	-0.00002	H500.49027	0.00104	-0.00118	0.00084	0.00121	0.00289	H505.13196	0.00038	-0.00008	0.00221	-0.00770
MIXCHGH	-0.00461	0.28153	-0.00307	0.01067	-0.00106	0.00517	H5.09382	0.03253	-0.00125	0.00482	-0.00626	L-0.01097
ICV	0.09785	26.63588	0.26061	0.50617	0.50304	0.25115	0.26451	26.05234	0.25549	0.24931	0.49993	0.50921
ICB	0.00014	0.03548	0.00034	-0.00477	-0.00021	0.00024	-0.00094	0.04267	0.00009	0.00017	0.00028	-0.00071
CRI	0.01988	0.46801	0.01377	0.41193	0.41467	0.01231	0.04773	5.46985	0.01188	0.10231	0.02098	0.05114
ICSA	-0.00059	276.15495	0.00090	-0.00663	-0.00056	0.00078	0.00483	269.97351	0.00029	0.00047	-0.00110	-0.00431
ICSAB	0.18970	216.55553	0.09803	0.98565	0.49121	0.47043	0.52252	265.88984	0.97115	0.45978	0.45320	0.51681
CCV	0.19504	53.52047	0.50892	1.01470	1.00194	0.49118	0.52822	52.00027	0.50651	0.48760	0.97359	1.02134
CCB	-0.00030	0.08424	-0.00061	-0.00273	-0.00055	0.00030	0.00125	0.05983	-0.00005	-0.00062	-0.00073	-0.00157
F111006-1MB	-0.00013	0.02410	0.00043	0.01064	0.00326	0.00010	-0.00679	0.49345	-0.00044	-0.00064	-0.00070	-0.00157
F111006-1RVS	0.00817	1.02421	0.05108	0.04790	0.04833	0.01014	0.09914	5.00676	0.01929	0.01850	0.04745	0.04822
F111006-1LCS	0.00004	1.98000	1.96618	0.49609	1.94528	0.04934	-0.00272	0.48747	0.04942	0.48041	0.19470	0.24830
1109351-1	-0.00054	0.01135	0.00175	0.00444	0.04738	0.00021	-0.00484	10.14674	-0.00049	-0.00049	-0.00069	-0.00139
1109351-2	-0.00025	0.01274	-0.00028	0.00413	0.04671	0.00013	-0.00062	9.97556	-0.00059	-0.00077	-0.00089	-0.00165
1109351-4	-0.00062	-0.00184	0.00067	0.00444	0.04524	0.00010	0.00003	9.70468	-0.00052	-0.00113	-0.00096	-0.00152
1109351-5	0.00019	-0.00637	-0.00018	0.01347	0.04733	0.00003	-0.00257	9.77592	-0.00020	-0.00049	-0.00054	-0.00157
1109381-1	-0.00038	0.06598	0.00081	0.01939	0.04219	0.00006	-0.00531	45.96971	-0.00047	-0.00108	-0.00047	0.00194
1109381-1D	-0.00021	0.07144	-0.00075	0.01905	0.04161	0.00011	-0.00255	45.82410	-0.00043	-0.00074	-0.00030	0.00172
1109381-1L 5X	-0.00025	0.00630	0.00237	0.00041	0.00766	0.00006	-0.00281	9.11159	-0.00042	-0.00073	-0.00068	-0.00123
CCV	0.19525	52.85693	0.51206	1.01514	0.99513	0.48770	0.53673	51.87056	0.50772	0.48715	0.96997	1.02295
CCB	-0.00040	0.06160	0.00086	-0.00142	-0.00018	0.00054	-0.00403	0.04007	-0.00021	-0.00095	-0.00001	-0.00148
1109381-1MS	-0.00048	2.12716	1.98303	0.51822	1.97761	0.04869	-0.00386	46.27018	0.04896	0.47035	0.18875	0.25167
1109381-1MSD	-0.00042	2.15727	2.02166	0.52948	2.01718	0.04976	-0.00050	46.88678	0.04927	0.47808	0.19218	0.25736
1109382-1	-0.00024	0.02422	-0.00212	0.00909	0.02842	0.00034	-0.00614	55.63485	-0.00046	-0.00064	-0.00048	-0.00182
1109382-2	-0.00022	0.99561	-0.00004	0.01185	0.31888	0.00032	-0.00107	5.68133	-0.00012	-0.00023	0.00116	0.00349
1109382-4	-0.00044	0.00921	-0.00435	0.01802	0.02937	0.00023	-0.00135	53.03413	-0.00041	-0.00103	-0.00094	-0.00238
1109382-5	-0.00023	0.09188	0.00317	0.01185	0.27541	0.00020	-0.00345	5.23879	-0.00052	-0.00051	-0.00058	-0.00084
1110028-10	-0.00007	0.00664	-0.00080	0.00547	0.25810	0.00014	-0.00557	55.41471	-0.00024	-0.00104	-0.00079	-0.00173
1110028-11	0.00041	0.00677	0.00251	0.00547	0.07679	0.00019	-0.00005	14.94342	-0.00008	-0.00042	-0.00072	-0.00076
1110028-12	0.00003	0.01614	-0.00316	0.03349	0.38717	0.00021	-0.00508	2.15957	-0.00070	-0.00053	-0.00086	-0.00203
1110028-13	-0.00075	0.01349	0.00133	0.19584	0.04333	0.00022	-0.00176	3.01119	-0.00074	-0.00104	-0.00101	-0.00211
CCV	0.19404	52.81637	0.50868	1.01670	0.99394	0.48309	0.53300	51.56868	0.51082	0.48446	0.96177	1.03278
CCB	-0.00055	0.09249	-0.00156	-0.00149	0.00005	0.00069	-0.00354	0.05086	0.00021	-0.00044	-0.00019	-0.00153
1110028-14	0.00026	0.02760	-0.00435	0.00895	0.02591	0.00036	-0.00419	55.34694	-0.00014	-0.00070	-0.00025	-0.00234
1110028-15	-0.00074	0.03659	0.00246	0.01147	0.04292	0.00040	-0.00489	45.47122	-0.00054	-0.00083	-0.00087	0.01114
1110035-9	-0.00059	0.04389	-0.00033	0.01057	0.03412	0.00034	-0.00265	3.98436	-0.00044	-0.00078	-0.00106	-0.00032
1110035-10	-0.00035	0.03965	0.00232	0.00313	0.04352	0.00029	-0.00346	7.46611	-0.00058	-0.00089	-0.00083	-0.00246
1110035-11	-0.00064	0.09023	0.00034	0.12636	0.05408	0.00030	-0.00459	9.06111	-0.00042	-0.00088	-0.00086	-0.00148
1110035-12	-0.00062	0.02499	-0.00231	0.00954	0.25025	0.00028	-0.00538	35.18907	-0.00044	-0.00096	-0.00117	0.03825
IP111007-2MB	-0.00059	0.02449	-0.00047	-0.00452	-0.00084	0.00020	-0.00484	0.00016	-0.00053	-0.00047	-0.00073	-0.00242
ZZZ	-0.00035	0.08316	-0.00122	0.00678	0.00019	0.00076	-0.00372	0.52689	-0.00028	0.00040	0.00417	0.00772
IP111007-2LCS	0.00002	2.00878	2.00925	0.49447	1.92343	0.04944	0.00076	0.00367	0.04996	0.48089	0.19283	0.24979
IP111007-2LCSD	0.00012	2.00483	1.99790	0.49267	1.91585	0.04916	-0.00347	0.00367	0.04988	0.47678	0.19214	0.24833
IP111007-2LCS	0.19615	52.72134	0.51329	1.01833	0.99195	0.48236	0.53682	51.87769	0.51664	0.48565	0.96277	1.03682
CCV	-0.00016	0.10208	0.00128	-0.00170	0.00008	0.00077	-0.00119	0.04137	0.00009	-0.00016	-0.00011	-0.00195
1109372-1	-0.00015	0.07460	-0.00198	0.07372	0.06684	0.00055	-0.00183	289.17856	-0.00064	-0.00013	0.00047	-0.00219
1109372-1D	-0.00003	0.07410	-0.00170	0.07189	0.05896	0.00051	-0.00224	280.09647	-0.00041	-0.00078	-0.00075	-0.00249
1109372-1L 5X	-0.00023	0.04591	-0.00477	0.01212	0.01315	0.00036	-0.00078	55.29789	0.00004	-0.00054	-0.00071	-0.00256
1109372-1A	0.00002	2.10620	1.95291	0.56795	1.95950	0.04690	-0.00268	279.97398	0.04891	0.45721	0.18145	0.25084



Sample Id1	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu
1109372-2	0.00007	0.04301	0.00417	0.07089	0.05777	0.00040	-0.00159	278.86948	-0.00035	-0.00032	-0.00050	-0.00236
1109372-3	-0.00048	0.04216	-0.00278	0.10502	0.04359	0.00047	0.00133	311.31655	-0.00050	-0.00065	-0.00092	-0.00344
1109372-4	-0.00013	0.04056	0.00185	0.10529	0.04192	0.00050	-0.00004	311.09003	-0.00055	-0.00047	-0.00087	-0.00350
1109372-5	-0.00012	0.04255	0.01859	0.05245	0.04962	0.00051	-0.00092	170.76669	-0.00014	0.00067	-0.00067	-0.00249
1109372-6	-0.00030	0.05315	-0.00539	0.10526	0.04794	0.00065	0.00069	371.22883	-0.00023	-0.00070	-0.00102	-0.00311
1110028-1	-0.00071	0.05445	0.00005	0.00571	0.26128	0.00048	-0.00346	57.75195	-0.00055	-0.00046	-0.00058	-0.00229
CCV	0.19511	52.46667	0.51677	1.01722	0.98712	0.47895	0.53209	51.60211	0.51644	0.48228	0.95617	1.03960
CCB	0.00038	0.11603	-0.00061	-0.00108	0.00003	0.00090	0.00019	0.08038	0.00012	-0.00001	0.00047	-0.00191
1110028-2	-0.00018	0.13274	-0.00189	0.00544	0.11105	0.00047	-0.00168	15.96912	-0.00009	-0.00031	-0.00009	0.02409
1110028-4	-0.00089	0.08226	-0.00141	0.03497	0.45553	0.00049	-0.00330	2.25349	-0.00036	-0.00047	0.00010	-0.00088
1110028-5	-0.00015	0.05497	-0.00080	0.20291	0.04780	0.00043	-0.00167	3.11385	-0.00045	-0.00019	0.00151	0.00125
1110028-7	-0.00037	0.04683	-0.00179	0.00833	0.02582	0.00038	-0.00387	54.43838	-0.00041	-0.00088	-0.00069	-0.00340
1110028-8	0.00034	0.11796	-0.00160	0.01171	0.04326	0.00041	-0.00009	45.37703	-0.00069	-0.00059	-0.00014	0.01366
1110035-1	-0.00071	0.08789	-0.00160	0.01095	0.03507	0.00046	-0.00102	4.11451	-0.00035	-0.00036	-0.00034	0.00057
1110035-4	-0.00053	0.08313	-0.00293	0.00354	0.04589	0.00046	-0.00225	8.38024	-0.00036	-0.00086	-0.00101	-0.00305
1110035-5	-0.00012	0.18113	0.00142	0.12684	0.05396	0.00058	-0.00654	9.04095	-0.00048	-0.00064	-0.00071	-0.00233
1110035-7	-0.00059	0.06581	-0.00103	0.00909	0.26045	0.00059	-0.00302	36.92090	-0.00050	-0.00098	-0.00102	0.04180
IP111007-4MB	-0.00063	0.38978	-0.00085	-0.00397	-0.00097	0.00044	-0.00623	-0.01856	-0.00036	-0.00213	-0.00001	-0.00344
CCV	0.19566	52.46274	0.51624	1.01570	0.98168	0.47605	0.54726	51.62155	0.51988	0.48201	0.95397	1.04182
CCB	-0.00018	0.12740	0.00213	-0.00211	-0.00014	0.00086	-0.00200	0.04865	0.00029	-0.00059	0.00015	-0.00246
IP111007-4RVS	0.00874	1.02237	0.04371	0.04252	0.04708	0.00983	0.09410	4.90132	0.01964	0.01744	0.04949	0.04968
IP111007-4LCS	0.08884	2.07260	1.84278	0.45062	1.92253	0.04684	-0.00689	38.56380	0.04657	0.45748	0.18520	0.25211
IP111007-4LCSD	0.08816	2.05567	1.83637	0.44814	1.90962	0.04669	-0.00634	38.34614	0.04649	0.45561	0.18371	0.25006
1109301-1	0.02861	18.81806	2.31063	0.04183	1.77133	0.00423	0.01150	27.74141	-0.00094	0.09751	1.59071	0.55815
1109301-1D	0.03607	24.44129	2.91093	0.05217	2.17660	0.00528	0.01119	33.32108	-0.00173	0.11217	2.00603	0.68627
1109301-1L 5X	0.00578	3.84688	0.48810	0.00613	0.36040	0.00136	-0.00211	5.82952	-0.00061	0.01987	0.33137	0.10859
1109301-1MS	0.11974	39.22813	4.22288	0.48480	3.66131	0.04983	0.00551	65.77545	0.04518	0.54385	1.80244	0.81183
1109301-1MSD	0.11189	32.23553	3.58298	0.45162	3.16854	0.04491	0.00452	56.36931	0.04240	0.48818	1.41027	0.68175
ZZZ	L-3.46263	25.48470	H12.26347	0.09668	9.93428	0.45611	L-0.09353	18.04193	L-0.10517	0.02171	0.24446	0.51449
ZZZ	-0.00207	87.56404	0.18511	0.04611	1.17774	0.00923	0.00382	363.62786	0.00223	0.06195	0.07249	0.20464
CCV	0.19534	51.95217	0.50759	1.00245	0.97074	0.46904	0.53479	51.20863	0.51711	0.47565	0.94442	1.03058
CCB	-0.00013	0.13594	-0.00070	-0.00173	0.00063	0.00090	-0.00224	0.07570	0.00014	-0.00047	0.00000	-0.00281
ZZZ	L-0.78554	5.17605	2.71592	0.01898	2.07915	0.10590	L-0.02069	4.31992	L-0.02372	0.00425	0.05611	0.09830
ZZZ	0.08744	127.72480	1.99187	0.40640	3.14124	0.05461	0.00407	387.13047	0.04830	0.49670	0.26397	0.46019
ZZZ	0.19217	51.50390	0.50707	0.99757	0.96383	0.46174	0.53621	50.59464	0.51499	0.47135	0.92936	1.03153
ZZZ	0.00011	0.16890	0.00024	-0.00142	0.00054	0.00105	-0.00387	0.10183	0.00041	0.00026	0.00037	-0.00298
CCV	0.19392	52.80681	0.49875	0.98809	0.97320	0.47948	0.50761	50.75051	0.49266	0.47871	0.95621	1.01434
CCB	0.00019	0.05264	-0.00137	-0.00073	0.00016	0.00041	0.00060	0.07167	0.00006	-0.00035	-0.00033	-0.00101
1109363-1	-0.00120	90.03572	0.18530	0.04883	1.20553	0.00873	0.00322	367.92063	0.00223	0.06315	0.07539	0.20407
1109363-1D	-0.00129	95.63600	0.19591	0.04483	1.20038	0.00923	0.00239	345.89616	0.00261	0.06676	0.08089	0.19560
1109363-1L 5X	-0.00034	18.06545	0.03883	0.00713	0.24555	0.00201	-0.00206	71.53122	0.00004	0.01231	0.01525	0.03852
1109363-1MS	0.08766	129.37760	1.97748	0.39950	3.14915	0.05502	0.00710	388.08970	0.04782	0.50334	0.26983	0.45433
1109363-1MSD	0.08799	124.39497	1.96449	0.39429	3.08385	0.05473	0.00665	383.49986	0.04776	0.50169	0.26713	0.44977
CCV	0.19536	52.97412	0.50174	0.99660	0.97814	0.48643	0.51022	51.67750	0.50136	0.48579	0.97064	1.01916
CCB	-0.00038	0.01121	0.00199	-0.00232	-0.00055	0.00017	0.00043	-0.00010	-0.00027	-0.00083	-0.00076	-0.00195
1109363-2	-0.00070	22.25763	0.05302	0.01367	0.37679	0.00311	0.00289	86.93251	0.00045	0.02633	0.02071	0.04215
1109363-3	-0.00089	26.14957	0.03599	0.01378	0.50191	0.00340	0.00039	78.37644	0.00087	0.03363	0.02543	0.04527
1109363-4	-0.00096	26.89086	0.04248	0.01167	0.43247	0.00390	0.00024	74.71776	0.00063	0.03830	0.02677	0.05236
1109363-5	-0.00075	25.37414	0.04120	0.00971	0.42658	0.00356	0.00264	69.96412	0.00061	0.03658	0.02525	0.04720
1109363-6	-0.00077	27.88801	0.03931	0.01757	0.51180	0.00366	0.00374	86.08384	0.00069	0.03063	0.02719	0.05099

Sample Id1	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu
1109363-7	-0.00145	28.32799	0.04295	0.00957	0.55883	0.00389	0.00074	87.04774	0.00050	0.03932	0.02711	0.05127
1109363-8	-0.00045	25.15743	0.05179	0.00750	0.62367	0.00363	0.00192	88.38853	0.00081	0.03140	0.02371	0.04500
CCV	0.19404	52.48068	0.50255	0.99795	0.97240	0.48244	0.52036	51.44827	0.50303	0.48374	0.96337	1.02068
CCB	-0.00045	0.04411	-0.00430	-0.00159	-0.00011	0.00039	-0.00314	0.04033	-0.00029	-0.00065	-0.00073	-0.00191
1109363-9	-0.00058	38.73227	0.03245	0.01795	0.70506	0.00355	0.00077	35.59290	0.00074	0.02748	0.03521	0.05525
1109363-10	-0.00103	30.35605	0.03642	0.01974	0.59352	0.00362	-0.00245	75.37120	0.00088	0.03140	0.02834	0.04964
1109363-11	-0.00077	22.03302	0.03131	0.01133	0.43072	0.00309	-0.00226	59.79140	0.00065	0.02906	0.02193	0.04314
1109363-12	-0.00193	83.68894	0.14603	0.03235	1.10036	0.01022	0.00984	173.44089	0.00203	0.07727	0.07887	0.37766
IP111007-5MB	-0.00037	0.00339	-0.00028	-0.00387	-0.00097	-0.00002	-0.00233	-0.01739	-0.00024	-0.00168	-0.00077	-0.00246
IP111007-5RVS	0.00813	0.98463	0.04527	0.04197	0.04717	0.00958	0.09321	4.86308	0.01866	0.01747	0.04824	0.04819
IP111007-5LCS	0.08748	1.98438	1.79723	0.43761	1.86636	0.04596	-0.00448	37.77367	0.04569	0.45209	0.18333	0.24445
1109362-1	-0.00133	39.49197	0.10603	0.01729	0.47838	0.00492	-0.00092	124.99645	0.00061	0.02607	0.02683	0.05502
1109362-1D	-0.00091	37.22657	0.10607	0.01498	0.38112	0.00463	-0.00169	124.32152	0.00092	0.02597	0.02621	0.05474
1109362-1L 5X	-0.00022	8.13790	0.02469	0.00113	0.09737	0.00113	0.00014	26.04293	0.00005	0.00539	0.00587	0.00930
CCV	0.19241	51.87091	0.49423	0.97979	0.95674	0.47345	0.51356	50.56279	0.49652	0.47524	0.94781	1.00873
CCB	-0.00025	0.03754	-0.00080	-0.00246	-0.00041	0.00034	-0.00630	0.01537	-0.00028	-0.00041	-0.00031	-0.00204
1109362-1MS	0.08633	57.22631	1.85628	0.38794	2.21528	0.04943	0.00196	171.40915	0.04555	0.45946	0.20933	0.30180
1109362-1MSD	0.08870	55.46771	1.91102	0.40917	2.28991	0.05116	-0.00164	164.24618	0.04701	0.47478	0.21409	0.30920
1109362-2	-0.00113	36.02492	0.09580	0.01591	0.38114	0.00471	-0.00224	130.42436	0.00073	0.02524	0.02546	0.05127
1109362-3	-0.00075	31.38276	0.13794	0.00868	0.42938	0.00404	0.00083	74.94094	0.00043	0.02217	0.02121	0.03536
1109362-4	-0.00114	34.85539	0.05870	0.00995	0.52711	0.00363	-0.00065	62.13794	0.00073	0.02443	0.02904	0.04098
1109362-5	-0.00107	34.04651	0.02587	0.00868	0.58270	0.00328	-0.00293	52.20139	0.00045	0.02367	0.03067	0.03702
1109362-6	-0.00112	59.56599	0.03614	0.01812	0.93041	0.00497	0.00012	40.23478	0.00068	0.03563	0.05124	0.06831
1109362-7	-0.00084	51.96087	0.03197	0.01154	0.80833	0.00443	0.00232	56.05256	0.00062	0.03476	0.04645	0.06104
1109362-8	-0.00045	31.70247	0.02412	0.01026	0.47918	0.00281	-0.00181	27.32127	0.00057	0.02089	0.02853	0.03498
1109362-9	-0.00084	38.67815	0.03741	0.02508	0.62693	0.00361	-0.00077	88.30309	0.00112	0.02406	0.03398	0.04803
CCV	0.19516	52.32876	0.49808	0.98705	0.96532	0.47739	0.52026	51.00443	0.49945	0.48002	0.95510	1.01894
CCB	-0.00066	0.05612	-0.00075	-0.00228	-0.00018	0.00043	-0.00330	0.03253	-0.00043	-0.00080	-0.00086	-0.00242
1109362-10	-0.00071	28.72399	0.05113	0.01126	0.41168	0.00323	-0.00106	69.53432	0.00059	0.01907	0.02301	0.03921
1109362-11	-0.00092	66.22968	0.06362	0.00623	0.23642	0.00497	0.00368	69.61892	0.00051	0.02973	0.01860	0.04156
1109362-12	-0.00082	24.09497	0.02701	0.00861	0.39685	0.00264	-0.00165	170.66725	0.00085	0.01853	0.02402	0.03855
1109362-13	-0.00091	31.77999	0.02223	0.01722	0.44912	0.00305	-0.00112	26.56026	0.00091	0.02313	0.03053	0.05011
1109362-14	-0.00052	34.67290	0.02970	0.01636	1.02794	0.00389	-0.00010	27.48908	0.00128	0.02832	0.03622	0.05044
IP111007-3MB	-0.00022	0.05934	-0.00250	-0.00449	-0.00041	0.00029	-0.00200	0.00718	-0.00068	-0.00056	-0.00098	-0.00267
IP111007-3RVS	0.00948	1.03969	0.04697	0.04562	0.04638	0.01010	0.09994	5.01960	0.01965	0.01856	0.04783	0.04694
IP111007-3LCS	-0.00013	0.03013	0.00034	-0.00366	-0.00084	0.00021	-0.00395	-0.00569	-0.00050	-0.00077	-0.00033	-0.00281
1110025-1 10X	-0.00020	0.02937	0.00123	0.00471	0.00133	0.00019	-0.00444	4.97965	-0.00016	-0.00086	0.00005	-0.00255
1110025-1D 10X	-0.00015	0.02263	0.00190	0.00461	0.00117	0.00017	-0.00071	5.02458	-0.00059	-0.00065	-0.00017	-0.00302
CCV	0.19524	52.02572	0.50835	0.99608	0.96401	0.48035	0.52626	51.50784	0.50345	0.48340	0.96071	1.01891
CCB	-0.00025	0.06211	-0.00122	-0.00228	-0.00035	0.00052	-0.00427	0.00835	-0.00037	-0.00047	-0.00025	-0.00246
1110025-1L 50X	0.00026	0.06296	0.00062	-0.00104	0.00007	0.00050	-0.00379	1.04206	-0.00004	-0.00004	0.00001	-0.00251
1110025-1MS 10X	-0.00032	0.05461	-0.00383	0.00561	0.00147	0.00046	-0.00233	5.03086	-0.00019	-0.00068	-0.00020	-0.00263
1110025-1MSD 10X	-0.00025	0.04844	-0.00089	0.00458	0.00129	0.00043	-0.00339	5.13842	-0.00063	-0.00098	-0.00055	-0.00327
1110025-2 5X	-0.00044	0.05289	0.00081	0.01371	0.00356	0.00046	-0.00249	10.09579	-0.00066	-0.00079	0.00007	-0.00259
1110025-3 5X	-0.00022	0.04813	0.00034	0.01309	0.00754	0.00037	-0.00143	18.96260	-0.00025	-0.00055	0.00000	-0.00251
1110025-4 5X	-0.00056	0.05348	0.00043	0.01347	0.00357	0.00035	-0.00427	10.84962	-0.00045	-0.00091	0.00061	-0.00233
1110025-5 5X	-0.00044	0.03478	0.00279	0.01302	0.00263	0.00031	-0.00346	9.16536	-0.00035	-0.00074	-0.00030	-0.00259
1110025-6 5X	-0.00027	0.03583	0.00228	0.01336	0.00343	0.00025	-0.00362	10.63466	-0.00069	-0.00082	0.00049	-0.00204
1110025-7 5X	0.00026	0.03365	0.00322	0.01422	0.00357	0.00026	-0.00216	10.94952	-0.00043	-0.00031	0.00109	-0.00192
1110025-8 5X	0.00012	0.03470	0.00138	0.01347	-0.00088	0.00027	-0.00022	0.20924	-0.00020	-0.00035	0.00019	-0.00247

Sample Id1	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu
CCV	0.19535	52.35910	0.51463	1.00124	0.96907	0.48209	0.52799	51.82718	0.50946	0.48627	0.96381	1.03146
CCB	-0.00060	0.10100	-0.00383	-0.00201	0.00012	0.00083	-0.00257	0.03552	0.00019	-0.00044	-0.00007	-0.00204
1110025-9 5X	-0.00001	0.07753	-0.00160	0.01329	0.00003	0.00062	-0.00297	1.13569	-0.00018	-0.00044	0.00010	-0.00208
1110025-10 5X	-0.00044	0.05696	-0.00085	0.01364	-0.00079	0.00043	-0.00184	0.48929	-0.00040	-0.00086	-0.00024	-0.00280
1110025-11 5X	-0.00045	0.06706	-0.00066	0.01419	-0.00074	0.00051	-0.00638	0.16659	0.00001	-0.00056	0.00036	-0.00238
1110025-12 5X	-0.00081	0.05415	0.00194	0.01261	-0.00053	0.00044	-0.00574	2.93401	-0.00044	-0.00092	-0.00057	-0.00306
1110025-13 5X	-0.00078	0.04882	-0.00122	0.01326	-0.00090	0.00036	-0.00452	0.16399	-0.00050	-0.00062	-0.00013	-0.00276
1110025-14 5X	-0.00052	0.04827	0.00015	0.01347	-0.00084	0.00038	-0.00281	0.72898	-0.00048	-0.00074	0.00042	-0.00268
IP111010-2MB	-0.00030	0.03561	-0.00222	-0.00439	-0.00102	0.00029	-0.00087	-0.03000	-0.00059	-0.00077	-0.00090	-0.00293
IP111010-2RVS	0.00926	1.03817	0.04867	0.04652	0.04592	0.01008	0.09945	4.95947	0.01982	0.01872	0.04712	0.04639
IP111010-2LCS	-0.00080	0.04189	0.00180	-0.00359	-0.00095	0.00038	-0.00249	38.72077	-0.00089	-0.00062	-0.00030	-0.00302
1110088-1 2X	-0.00003	0.04352	-0.00132	0.08644	0.01351	0.00049	-0.00224	239.17422	-0.00038	-0.00051	-0.00050	-0.00135
CCV	0.19165	51.66160	0.49528	0.98152	0.96024	0.46700	0.52469	50.24077	0.49795	0.47333	0.93650	1.02386
CCB	-0.00009	0.06133	-0.00033	-0.00194	-0.00021	0.00044	-0.00281	0.02005	-0.00020	-0.00016	0.00013	-0.00179
1110088-1D 2X	-0.00059	0.02420	-0.00061	0.08713	0.01383	0.00047	-0.00419	239.98861	-0.00035	-0.00066	-0.00079	-0.00015
1110088-1L 10X	-0.00054	0.01516	-0.00255	0.01509	0.00214	0.00026	-0.00233	46.16880	-0.00047	-0.00086	-0.00070	-0.00203
1110088-1MS 2X	-0.00025	0.01522	-0.00047	0.08554	0.01343	0.00034	-0.00338	256.32517	-0.00058	-0.00075	-0.00047	-0.00161
1110088-1MSD 2X	-0.00032	0.01090	-0.00089	0.08699	0.01372	0.00034	-0.00395	261.52219	-0.00050	-0.00042	-0.00044	-0.00152
1110088-2 2X	-0.00035	0.00561	-0.00028	0.08595	0.01330	0.00026	0.00124	237.55628	-0.00025	-0.00048	-0.00058	-0.00169
1110088-3 2X	-0.00068	0.00076	-0.00463	0.08709	0.01344	0.00023	-0.00201	237.72378	-0.00052	-0.00094	-0.00111	-0.00220
1110088-4 2X	-0.00080	-0.00486	0.00294	0.08330	0.01383	0.00019	-0.00532	242.18928	-0.00058	-0.00126	-0.00081	-0.00209
1110088-5 2X	-0.00055	-0.00234	0.00279	0.08502	0.01457	0.00021	-0.00289	245.91762	-0.00039	-0.00072	-0.00120	-0.00158
1110088-6 2X	-0.00054	0.00208	0.00516	0.08716	0.01949	0.00022	-0.00433	260.54188	-0.00042	-0.00083	-0.00083	0.00457
1110088-7 2X	-0.00027	0.00394	0.00199	0.08730	0.01600	0.00027	-0.00094	250.12954	-0.00023	-0.00029	-0.00058	-0.00142
CCV	0.19430	52.43962	0.51039	0.99058	0.96612	0.48341	0.51419	51.32555	0.49745	0.48522	0.96317	1.02248
CCB	-0.00040	0.05968	-0.00009	-0.00249	-0.00002	0.00061	-0.00468	0.04969	-0.00005	-0.00059	-0.00074	-0.00173
1110088-8 2X	-0.00104	0.03140	-0.00156	0.08661	0.01623	0.00050	-0.00330	249.01665	-0.00032	-0.00120	-0.00092	-0.00157
1110088-9 2X	-0.00032	0.02121	0.00341	0.08733	0.01744	0.00039	-0.00191	252.20181	-0.00065	-0.00047	-0.00066	-0.00022
1110088-10 2X	-0.00084	0.02360	-0.00089	0.08916	0.01558	0.00044	-0.00363	256.04352	-0.00037	-0.00102	-0.00105	-0.00212
1110088-11 2X	-0.00020	0.01846	0.00010	0.08778	0.01544	0.00035	-0.00484	251.29429	-0.00047	-0.00078	-0.00111	-0.00191
1110088-12 2X	0.00012	0.01905	0.00095	0.08933	0.02197	0.00034	-0.00325	280.01740	-0.00021	-0.00037	-0.00015	0.00524
1110088-13 5X	0.00016	0.01278	0.00209	0.01326	0.00315	0.00016	-0.00297	8.82815	-0.00025	0.00021	0.00121	-0.00161
1110088-14 5X	-0.00050	0.01224	0.00209	0.01364	0.00291	0.00016	-0.00322	7.62811	-0.00014	-0.00067	0.00055	-0.00191
1110088-15 2X	-0.00020	0.00027	0.00015	0.08764	0.01351	0.00022	-0.00078	240.77495	-0.00030	-0.00081	-0.00080	-0.00105
1110088-16 2X	-0.00063	0.00556	0.00209	0.08564	0.01344	0.00026	-0.00493	238.67971	-0.00030	-0.00102	-0.00118	-0.00117
1110088-17 2X	-0.00027	0.01101	0.00350	0.08823	0.01367	0.00030	-0.00127	241.53492	-0.00036	-0.00026	-0.00044	-0.00160
CCV	0.19339	52.24826	0.50868	0.98660	0.96387	0.47910	0.52282	50.83926	0.49680	0.48169	0.95583	1.02499
CCB	-0.00023	0.06832	0.00341	-0.00277	-0.00002	0.00062	-0.00362	0.04722	0.00011	-0.00019	-0.00011	-0.00165
1110088-18 2X	-0.00018	0.02343	0.00086	0.08771	0.01441	0.00045	-0.00061	248.88249	-0.00011	-0.00011	-0.00033	-0.00137
1110088-19 2X	-0.00083	0.02896	-0.00004	0.08685	0.01420	0.00044	-0.00110	246.62490	-0.00056	-0.00096	-0.00116	-0.00183
1110088-20 2X	-0.00065	0.02684	0.00071	0.08730	0.01413	0.00041	-0.00297	244.66447	-0.00063	-0.00072	-0.00102	-0.00166
IP1110110-3MB	-0.00010	0.02402	-0.00236	-0.00321	-0.00099	0.00027	0.00068	0.00406	-0.00044	-0.00071	-0.00080	-0.00268
IP1110110-3RVS	0.00933	1.04883	0.04957	0.04766	0.04678	0.01025	0.10116	5.00362	0.01917	0.01971	0.04803	0.04826
IP1110110-3LCS	0.00016	2.05339	1.95701	0.47845	1.85769	0.04743	-0.00089	38.66964	0.04791	0.46016	0.18276	0.24398
1110039-1	-0.00003	0.11343	0.00473	0.10726	0.04298	0.00029	-0.00467	73.59945	-0.00072	-0.00078	-0.00042	-0.00165
1110039-2	-0.00042	0.01038	0.00157	0.06000	0.07352	0.00023	-0.00377	46.01816	-0.00043	-0.00061	-0.00044	0.00566
1110039-3	-0.00046	0.25540	-0.00033	-0.00001	0.01287	0.00017	0.00004	10.17288	-0.00045	-0.00067	-0.00094	-0.00229
1110039-3D	0.00043	0.24753	0.00100	0.00096	0.01301	0.00021	0.00134	10.23611	-0.00032	0.00054	0.00020	-0.00141
CCV	0.19355	52.06098	0.50407	0.98335	0.96086	0.47775	0.51818	50.71184	0.49488	0.47987	0.95296	1.02388
CCB	-0.00089	0.07214	0.00095	-0.00228	-0.00011	0.00057	-0.00403	0.02980	-0.00023	-0.00074	-0.00031	-0.00242



Sample Id1	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu
1110039-3L 5X	-0.00056	0.07997	-0.00179	-0.00228	0.00186	0.00028	-0.00655	2.00372	-0.00055	-0.00080	-0.00085	-0.00280
1110039-3MS	-0.00021	2.35510	1.98815	0.49157	1.88738	0.04831	0.00051	49.72242	0.04887	0.46587	0.18547	0.24770
1110039-3MSD	-0.00071	2.34575	1.95127	0.48428	1.87831	0.04732	-0.00299	48.64250	0.04770	0.45684	0.18171	0.24711
1110053-1	-0.00022	0.04243	-0.00245	0.24986	0.01469	0.00040	-0.00361	51.30202	-0.00046	-0.00084	-0.00036	0.00378
1110053-2	-0.00124	0.03878	-0.00397	0.25493	0.01122	0.00038	-0.00280	52.86616	-0.00088	-0.00121	-0.00117	0.00409
1110088-21 2X	-0.00023	0.02717	0.00138	0.08782	0.01576	0.00035	-0.00062	248.73585	-0.00041	-0.00071	-0.00060	-0.00153
1110088-22 2X	-0.00052	0.02052	0.00138	0.08575	0.01553	0.00030	-0.00232	246.49743	-0.00050	-0.00078	-0.00099	-0.00204
1110088-23 2X	-0.00059	0.01820	0.00204	0.08706	0.01564	0.00032	0.00051	246.19886	-0.00034	-0.00114	-0.00105	-0.00199
1110088-24 2X	-0.00023	0.02270	0.00327	0.08940	0.01541	0.00030	0.00109	252.02239	-0.00058	-0.00068	-0.00063	-0.00149
1110088-25 2X	-0.00059	0.02472	0.00038	0.08782	0.01518	0.00034	-0.00630	247.98857	-0.00016	-0.00117	-0.00103	-0.00221
CCV	0.19405	52.22274	0.50854	0.98816	0.96415	0.47764	0.52258	50.94237	0.49752	0.48137	0.95397	1.02957
CCB	-0.00023	0.08102	0.00294	-0.00170	-0.00005	0.00065	-0.00289	0.04501	0.00012	-0.00041	0.00012	-0.00195
1110088-26 2X	-0.00072	0.03792	0.00190	0.08744	0.01683	0.00047	-0.00257	247.58114	-0.00034	-0.00087	-0.00104	-0.00195
1110088-27 5X	-0.00049	0.03809	-0.00004	0.01271	-0.00067	0.00036	-0.00225	1.25642	-0.00049	-0.00080	0.00022	-0.00306
1110088-28 5X	-0.00001	0.04540	-0.00321	0.01340	-0.00072	0.00038	-0.00232	1.15054	-0.00039	-0.00071	0.00104	-0.00213
1109372-1 10X	-0.00050	0.04275	-0.00373	0.00402	0.00587	0.00039	-0.00208	27.03757	-0.00031	-0.00043	-0.00070	-0.00302
1109372-1D 10X	-0.00032	0.03893	-0.00264	0.00451	0.00503	0.00036	-0.00306	26.72140	-0.00052	-0.00064	-0.00085	-0.00285
1109372-1L 50X	-0.00017	0.03113	-0.00364	-0.00208	0.00044	0.00025	0.00010	5.38256	-0.00048	-0.00074	-0.00077	-0.00302
1109372-1A 10X	-0.00047	0.03255	-0.00103	0.00337	0.00589	0.00025	-0.00379	27.13727	-0.00055	-0.00079	-0.00059	-0.00289
1109301-1 10X	0.00244	1.86012	0.23278	0.00199	0.17297	0.00051	-0.00153	2.84052	-0.00018	0.00926	0.16322	0.05082
1109301-1D 10X	0.00296	2.49792	0.31060	0.00151	0.21992	0.00062	-0.00183	3.58517	-0.00022	0.01100	0.21767	0.06481
1109301-1L 50X	-0.00006	0.39905	0.05099	-0.00253	0.03412	0.00026	-0.00209	0.55525	-0.00031	0.00141	0.03302	0.00805
CCV	0.19383	51.99152	0.50212	0.98550	0.95932	0.47422	0.51842	50.55957	0.49590	0.47900	0.94731	1.02779
CCB	-0.00118	0.06065	0.00109	-0.00228	-0.00044	0.00056	-0.00395	0.00016	-0.00019	-0.00101	-0.00093	-0.00254
1109301-1MS 10X	0.01259	4.18679	0.46686	0.05035	0.39041	0.00604	-0.00207	7.14709	0.00479	0.05991	0.20116	0.08324
1109301-1MSD 10X	0.01151	3.29556	0.38150	0.04538	0.32205	0.00523	-0.00057	5.93026	0.00451	0.05211	0.15213	0.06549
1109301-1A	0.02772	20.21598	4.09333	0.49747	3.54111	0.04880	0.00810	64.69739	0.04675	0.54859	1.66693	0.78849
1109363-1A	-0.00188	89.62578	2.01818	0.49619	3.01594	0.05330	0.00422	357.88293	0.04807	0.50132	0.24731	0.46178
1109363-12 5X	-0.00116	17.65159	0.03249	0.00499	0.23306	0.00275	-0.00071	36.22806	0.00001	0.01546	0.01629	0.07609
1109362-1A	-0.00090	40.55418	1.93206	0.46844	2.32793	0.04958	-0.00236	122.15190	0.04677	0.47476	0.20689	0.31029
1110088-4	-0.00042	0.04071	0.00445	0.17498	0.02854	0.00054	-0.00142	H508.01065	-0.00041	-0.00079	-0.00047	-0.00228
1110088-5	-0.00021	0.04160	0.00483	0.17626	0.02912	0.00051	-0.00158	H511.59790	-0.00038	-0.00063	-0.00055	-0.00161
1110088-18	-0.00027	0.03199	0.00180	0.17577	0.02870	0.00050	-0.00175	H508.08973	-0.00045	-0.00057	-0.00064	-0.00134
1110088-19	-0.00064	0.03153	0.00535	0.17450	0.02861	0.00053	-0.00248	H510.12872	-0.00039	-0.00042	-0.00075	-0.00168
CCV	0.19383	51.99359	0.50507	0.98294	0.95814	0.47328	0.52027	50.51518	0.49694	0.47805	0.94780	1.02644
CCB	-0.00011	0.07092	0.00133	-0.00204	-0.00025	0.00059	-0.00257	0.08779	-0.00014	-0.00074	-0.00014	-0.00268
1110088-20	-0.00067	0.04457	0.00497	0.17612	0.02863	0.00058	-0.00045	H504.22622	-0.00054	-0.00109	-0.00102	-0.00147
1110088-26	0.00051	0.04648	0.00005	0.17926	0.03405	0.00063	0.00101	H526.50012	-0.00040	-0.00039	-0.00032	-0.00093
1109301-1A 10X	0.00293	3.83082	2.16062	0.46995	2.01786	0.04775	-0.00050	3.27597	0.04748	0.47733	0.35300	0.30083
CRI	0.02058	0.52295	0.01291	0.41507	0.40877	0.01254	0.05520	5.52059	0.01232	0.10322	0.02161	0.05246
ICSA	-0.00030	276.63938	-0.00425	-0.00407	-0.00044	0.00126	0.00409	275.17302	0.00016	0.00101	-0.00087	-0.00669
ICSAB	0.19401	216.64989	0.09803	0.98176	0.48514	0.46221	0.53914	265.20246	0.99390	0.46107	0.45027	0.53866
CCV	0.19200	51.46876	0.49785	0.97851	0.94633	0.46546	0.52648	50.13593	0.49714	0.47271	0.93444	1.01897
CCB	-0.00025	0.09019	-0.00033	-0.00149	-0.00032	0.00058	-0.00078	0.03981	-0.00009	-0.00029	-0.00015	-0.00289



Sample Id1	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Pb I	Pb II
MIXBHGH	-0.01254	-0.06480	0.00798	-0.07478	9.81926	9.92969	-0.04148	H10.06894	49.64026	9.86659	9.90039	9.84972
MIXAHGH	197.76024	249.37092	9.99282	496.85713	L-0.01062	0.00168	H150.25362	0.00094	0.02061	-0.00389	L-0.03095	0.00963
MIXCHGH	0.00090	-0.05590	0.00825	-0.34364	0.00412	-0.00018	-0.04080	-0.00101	0.02592	0.00239	L-0.01896	0.01306
ICV	10.36681	23.64176	0.23633	26.20605	0.50360	0.49435	24.18092	0.49709	2.57484	0.50487	0.51581	0.49940
ICB	0.01268	-0.04925	0.00788	0.01767	0.00010	-0.00022	-0.03688	-0.00043	0.00228	-0.00150	-0.00207	-0.00122
CRI	0.21222	3.94326	0.02409	5.38719	0.03253	0.01989	4.20930	0.08161	0.20973	0.00594	0.00326	0.00727
ICSA	110.22115	-0.08539	0.00802	273.24078	0.00299	-0.00276	-0.03801	0.00036	0.00331	-0.00468	L-0.01912	0.00254
ICSAB	108.97360	-0.08234	1.01478	269.06628	0.47350	0.94271	-0.05731	0.91557	1.01045	0.04737	0.03035	0.05587
CCV	20.85081	50.10144	0.50646	52.25147	0.98472	0.99125	50.18524	0.97650	5.14603	0.99749	1.00241	0.99504
CCB	0.02223	-0.07511	0.00383	0.04278	-0.00025	-0.00090	-0.05767	-0.00123	-0.00003	-0.00215	L-0.00384	-0.00130
F111006-1MB	-0.00237	-0.06427	0.00367	-0.00807	-0.00060	-0.00222	1.92881	-0.00208	0.00032	-0.00250	-0.00238	-0.00256
F111006-1RVS	0.99038	7.79872	0.04226	4.98545	0.04783	0.09506	8.19867	0.04799	1.00708	0.04841	0.04775	0.04875
F111006-1LCS	0.99707	-0.06088	0.00370	-0.02639	0.48949	0.95985	1.98623	0.49658	10.31003	0.48090	0.48920	0.47676
1109351-1	0.01248	0.51383	0.00729	1.54598	0.03073	0.01460	86.12971	-0.00204	-0.00015	-0.00116	-0.00193	-0.00077
1109351-2	0.01388	0.50649	0.00724	1.52105	0.03065	0.01416	85.18859	-0.00197	-0.00072	-0.00028	-0.00154	0.00034
1109351-4	-0.00289	0.48738	0.00712	1.47119	0.02956	0.01348	82.51707	-0.00171	-0.00234	-0.00028	L-0.00366	0.00140
1109351-5	-0.00309	0.50264	0.00714	1.48891	0.02523	0.01294	84.16917	-0.00099	-0.00753	0.00075	0.00166	0.00030
1109381-1	0.09644	1.44385	0.01202	11.55062	0.03233	0.00385	7.84880	-0.00070	0.12466	0.00017	-0.00096	0.00074
1109381-1D	0.10859	1.43060	0.01192	11.47357	0.03222	0.00443	7.76576	-0.00056	0.13020	-0.00001	0.00090	-0.00047
1109381-1L 5X	0.01237	0.18568	0.00503	2.26340	0.00607	-0.00107	1.37554	-0.00062	0.02522	0.00023	-0.00003	0.00036
CCV	20.64247	49.61041	0.49593	51.64007	0.97545	0.99002	49.35989	0.99537	5.26571	0.99083	1.00116	0.98567
CCB	0.01445	-0.04959	0.00391	0.02405	0.00003	-0.00076	-0.03616	-0.00099	0.00158	0.00032	-0.00090	0.00093
1109381-1MS	1.07972	1.43513	0.01204	11.51769	0.50793	0.95944	7.81048	0.48749	10.29622	0.48079	0.48189	0.48024
1109381-1MSD	1.08972	1.45404	0.01218	11.69064	0.51563	0.97561	7.96273	0.49783	10.66161	0.48541	0.49114	0.48254
1109382-1	0.18488	0.98855	0.01515	4.36008	0.26617	-0.00073	39.64280	-0.00209	0.00401	-0.00138	-0.00285	-0.00064
1109382-2	1.01267	0.76437	0.01479	0.22954	0.05165	-0.00046	141.76265	0.00091	-0.01640	0.00036	-0.00111	0.00110
1109382-4	-0.00777	0.91287	0.01485	4.23978	0.25168	-0.00096	41.07455	-0.00212	-0.00879	0.00045	-0.00125	0.00130
1109382-5	0.08953	0.52661	0.01374	0.09982	0.03916	0.00002	132.45960	-0.00091	-0.02828	0.00069	0.00092	0.00058
1110028-10	0.00599	0.71123	0.00476	9.95969	-0.00064	-0.00151	10.78819	-0.00169	-0.00199	0.00039	L-0.00338	0.00228
1110028-11	-0.00564	0.55419	0.00812	1.27216	0.00092	-0.00140	67.89482	-0.00150	-0.00729	0.00069	0.00119	0.00045
1110028-12	0.92839	3.46587	0.03921	0.55512	0.02589	-0.00212	H325.04165	-0.00077	0.05244	-0.00064	-0.00148	-0.00022
1110028-13	2.51702	0.50366	0.06254	0.01602	0.03526	-0.00208	H196.43820	-0.00040	-0.00614	0.00058	L-0.00345	0.00259
CCV	20.47538	49.64226	0.49651	51.39742	0.96457	0.99043	48.66743	0.99877	5.19570	0.98302	0.99247	0.97831
CCB	0.01891	-0.05682	0.00396	0.03105	0.00026	-0.00008	0.04260	-0.00120	0.00216	0.00057	-0.00100	0.00136
1110028-14	0.00402	0.97611	0.01490	4.41869	0.26617	-0.00062	38.88719	-0.00146	-0.00407	-0.00108	-0.00082	-0.00121
1110028-15	0.00246	0.86808	0.00465	12.32316	0.00018	-0.00171	23.13969	-0.00125	-0.00453	-0.00025	-0.00126	0.00026
1110035-9	-0.00346	0.61162	0.00774	0.21162	0.01852	0.00029	102.53376	-0.00172	0.00112	-0.00092	-0.00293	0.00009
1110035-10	-0.00320	0.39132	0.00717	1.01402	0.01930	0.00941	79.57315	-0.00159	-0.00499	0.00030	0.00021	0.00034
1110035-11	0.07743	2.03447	0.04444	5.64654	0.00069	-0.00164	H251.41739	-0.00091	-0.00995	-0.00093	-0.00196	-0.00042
1110035-12	-0.00476	1.04512	0.00809	6.13186	-0.00036	-0.00161	39.26515	-0.00159	-0.00441	-0.00010	-0.00267	0.00118
IP111007-2MB	0.00998	-0.05704	0.00369	-0.03360	-0.00029	-0.00262	-0.05817	-0.00195	-0.00245	-0.00064	0.00092	-0.00142
ZZZ	0.05032	0.27199	0.01019	0.07058	0.00163	-0.00090	0.65874	0.00403	-0.00326	0.00006	-0.00028	0.00022
IP111007-2LCS	0.99085	-0.06890	0.00369	-0.04019	0.48234	0.95715	-0.06220	0.50359	10.17600	0.47644	0.49057	0.46939
IP111007-2LCSD	0.98258	-0.07421	0.00368	-0.04184	0.47904	0.95476	-0.07184	0.50112	10.18626	0.47566	0.48503	0.47097
ICV	20.45602	49.61224	0.49532	51.31922	0.96156	0.99531	49.09277	1.01456	5.14021	0.97869	0.99275	0.97168
CCB	0.01569	-0.04880	0.00394	0.02631	0.00014	0.00022	-0.02998	0.00008	0.00550	-0.00065	-0.00040	-0.00078
1109372-1	0.93232	3.91120	0.04126	51.23342	0.06274	0.00216	61.45643	0.00006	0.00597	-0.00059	0.00009	-0.00093
1109372-1D	0.90920	3.82820	0.04049	50.08028	0.06118	0.00233	60.24447	0.00113	0.00677	-0.00158	-0.00191	-0.00141
1109372-1L 5X	0.19080	0.53339	0.00971	10.34778	0.01274	-0.00130	10.81509	-0.00144	-0.00257	0.00037	-0.00086	0.00099
1109372-1A	1.83888	3.77988	0.04005	49.83655	0.51477	0.93981	59.84900	0.47556	21.23539	0.46795	0.47641	0.46372

Sample Id1	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Pb I	Pb II
1109372-2	0.78995	3.75851	0.03991	49.77911	0.05884	0.00358	59.58286	-0.00006	0.00516	-0.00061	-0.00107	-0.00038
1109372-3	22.17505	10.43742	0.05436	61.89612	0.16422	0.01338	116.32712	-0.00047	0.00297	-0.00003	-0.00057	0.00024
1109372-4	20.30002	10.40822	0.05419	61.77205	0.15460	0.01497	115.25217	-0.00094	0.00043	-0.00036	-0.00230	0.00061
1109372-5	6.19136	8.90243	0.04049	39.43530	0.83830	0.03810	105.06974	-0.00056	-0.00211	-0.00051	-0.00089	-0.00032
1109372-6	24.20857	10.47652	0.05476	61.50971	0.18315	0.01429	114.92573	-0.00064	-0.01041	0.00044	0.00023	0.00055
1110028-1	0.01954	0.73554	0.00482	10.21158	0.00014	-0.00151	10.85024	-0.00059	-0.00257	-0.00175	0.00014	-0.00269
CCV	20.32529	49.47361	0.49385	51.05041	0.95249	0.98647	48.62963	1.01736	5.13154	0.97262	0.98251	0.96769
CCB	0.02052	-0.04248	0.00398	0.03826	0.00026	-0.00029	-0.01336	-0.00043	0.00262	0.00022	0.00218	-0.00077
1110028-2	0.14896	0.61037	0.00846	1.36240	0.45833	-0.00083	72.89835	-0.00076	-0.00003	0.00035	-0.00001	0.00053
1110028-4	2.26663	3.54927	0.03976	0.56871	0.03506	-0.00100	H329.94419	-0.00050	0.08624	-0.00045	-0.00192	0.00028
1110028-5	3.29380	0.51621	0.06379	0.02075	0.04240	-0.00198	H202.29775	0.00073	0.00158	-0.00096	-0.00072	-0.00108
1110028-7	0.16663	0.97724	0.01486	4.30808	0.25689	-0.00134	38.35892	-0.00147	-0.00787	-0.00072	-0.00248	0.00015
1110028-8	0.17126	0.89251	0.00468	12.36999	0.00264	-0.00178	23.08590	-0.00120	-0.00453	0.00102	0.00327	-0.00011
1110035-1	0.02488	0.64101	0.00787	0.22521	0.01992	-0.00076	104.33652	-0.00128	0.00896	0.00039	0.00056	0.00030
1110035-4	0.04549	0.44669	0.00727	1.17100	0.02519	0.01016	83.03227	-0.00208	-0.00268	0.00019	-0.00165	0.00111
1110035-5	0.15359	2.02427	0.04387	5.60069	0.00233	-0.00140	H246.25928	-0.00131	-0.00580	-0.00028	-0.00078	-0.00003
1110035-7	0.00152	1.11923	0.00824	6.34648	-0.00036	-0.00235	40.53571	-0.00122	0.00101	0.00094	-0.00069	0.00175
IP111007-4MB	0.03002	-0.06337	0.00369	-0.03587	-0.00013	-0.00161	-0.01561	0.00022	0.03157	0.00184	L-0.00404	0.00478
CCV	20.21974	49.53956	0.49383	50.90080	0.94684	0.98107	48.79810	1.02161	5.19059	0.96500	0.97897	0.95802
CCB	0.01626	-0.07150	0.00390	0.02467	0.00014	0.00002	-0.01753	-0.00146	0.00112	0.00107	-0.00097	0.00209
IP111007-4RVS	0.99833	7.33439	0.03964	4.70576	0.04701	0.09658	7.59265	0.05031	0.92300	0.04785	0.04680	0.04838
IP111007-4LCS	0.97144	34.71055	0.43866	37.37072	0.45892	0.94671	33.82073	0.48442	-0.00291	0.45370	0.46108	0.45001
IP111007-4LCSD	0.96982	34.42556	0.43522	37.12896	0.45617	0.94394	33.51798	0.48329	0.00009	0.45438	0.45996	0.45159
1109301-1	H341.95032	8.75107	0.02572	10.25608	H63.43018	0.43248	4.26823	0.08494	4.21550	0.10146	0.10133	0.10152
1109301-1D	H412.75772	11.54714	0.03287	12.90365	H71.74050	0.51188	4.70417	0.10526	5.26595	0.12341	0.12079	0.12472
1109301-1L 5X	66.28314	1.41951	0.00750	2.15332	H13.97601	0.08796	0.71271	0.01757	0.88127	0.02090	0.02104	0.02082
1109301-1MS	H351.30896	47.55607	0.50867	48.16569	H61.48003	1.35336	40.87484	0.56840	4.19931	0.53857	0.55246	0.53163
1109301-1MSD	H278.45933	42.39202	0.45885	42.75607	H51.48470	1.20328	36.67909	0.50519	3.33290	0.49506	0.50525	0.48998
ZZZ	110.86629	9.93286	0.08882	L-5.57025	0.37774	0.65175	59.55025	0.15623	17.35619	27.52431	H27.78868	H27.39233
ZZZ	174.45196	30.29335	0.13091	42.47767	2.93356	0.13696	1.54658	0.12048	4.97990	0.20929	0.21073	0.20857
CCV	19.85627	49.11986	0.48668	50.46050	0.93429	0.97111	48.69422	1.00323	5.09139	0.95468	0.97104	0.94651
CCB	0.03885	-0.02881	0.00399	0.03002	0.00163	0.00066	-0.02446	-0.00087	-0.00291	0.00076	0.00142	0.00042
ZZZ	23.29532	1.57112	0.01830	L-1.29896	0.08672	0.14616	10.87783	0.03732	3.69662	5.86282	5.98263	5.80301
ZZZ	199.79455	75.86929	0.68268	85.81800	3.46508	0.98005	42.23073	0.58449	5.08439	0.64353	0.65841	0.63610
ZZZ	19.59617	48.90394	0.48540	49.83127	0.91752	0.95964	48.33306	1.01615	5.04603	0.93801	0.95622	0.92892
ZZZ	0.04617	-0.03152	0.00402	0.04176	0.00112	0.00070	-0.02588	0.00048	0.00089	0.00090	0.00275	-0.00002
CCV	20.18228	49.01361	0.49291	51.50840	0.95859	0.96824	49.35302	0.95162	5.23659	0.97658	0.98380	0.97297
CCB	0.03293	-0.04632	0.00392	0.02734	0.00077	-0.00056	-0.02914	-0.00120	0.00297	0.00071	-0.00080	0.00146
1109363-1	181.06124	30.40230	0.13353	43.81025	3.06063	0.13883	1.57112	0.11671	5.16279	0.21604	0.21237	0.21787
1109363-1D	194.44454	31.75949	0.14009	45.91607	3.10680	0.14046	1.51440	0.12222	5.29817	0.22240	0.22050	0.22334
1109363-1L 5X	34.71197	4.94650	0.02461	9.21934	0.64885	0.02755	0.20552	0.02422	1.08691	0.04512	0.04455	0.04541
1109363-1MS	H205.62533	75.25743	0.68782	87.59820	3.58348	0.98224	42.78050	0.56545	5.26393	0.66226	0.66634	0.66023
1109363-1MSD	H201.24734	73.66669	0.67876	86.17051	3.52871	0.99039	42.48078	0.55789	5.13974	0.66152	0.66484	0.65987
CCV	20.40400	49.09956	0.49359	51.82546	0.97023	0.98493	49.50134	0.97112	5.26084	1.00095	0.99117	1.00583
CCB	0.00526	-0.04824	0.00380	-0.01610	-0.00021	-0.00042	-0.05642	-0.00111	-0.00407	-0.00004	0.00013	-0.00013
1109363-2	92.76816	11.01446	0.03358	17.16282	1.43407	0.04821	0.49559	0.03509	2.48191	0.08858	0.08512	0.09030
1109363-3	100.79915	10.79456	0.03917	25.83252	1.53918	0.00555	0.27818	0.04340	3.17963	0.06505	0.06462	0.06527
1109363-4	122.64647	8.24085	0.03999	22.26968	1.58550	0.00463	0.30055	0.04837	2.67778	0.06801	0.06655	0.06874
1109363-5	102.56679	7.76770	0.03790	21.46195	1.42785	0.00338	0.31437	0.04628	2.56278	0.06242	0.06198	0.06263
1109363-6	102.82480	13.88812	0.04175	25.89470	1.40701	0.00385	0.30625	0.04573	3.02310	0.06491	0.06253	0.06610



Sample Id1	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Pb I	Pb II
1109363-7	113.04404	6.29219	0.04387	25.01456	1.45743	0.00738	0.34672	0.05041	2.73999	0.06792	0.06499	0.06939
1109363-8	105.26317	5.83054	0.03734	20.81709	1.59145	0.05116	0.31504	0.04516	2.37850	0.06445	0.06287	0.06524
CCV	20.26284	48.57151	0.48914	51.42638	0.96077	0.97892	49.09698	0.98062	5.25929	0.98081	0.98804	0.97720
CCB	0.03755	-0.04654	0.00388	0.00325	0.00046	-0.00059	-0.04969	-0.00128	-0.00384	0.00054	-0.00124	0.00143
1109363-9	94.42787	11.23365	0.04099	17.85531	1.22453	0.00209	0.15431	0.04991	2.43230	0.06684	0.06179	0.06937
1109363-10	97.35291	18.35798	0.04484	25.89512	1.31467	0.00243	0.31121	0.04615	3.27259	0.06444	0.06186	0.06573
1109363-11	94.66087	9.15181	0.03259	19.48600	1.36686	0.00253	0.19910	0.03845	3.15062	0.05696	0.05413	0.05837
1109363-12	H225.16046	25.19484	0.12471	42.69357	2.17128	0.17630	1.33867	0.11185	4.84831	0.26258	0.26510	0.26132
IP111007-5MB	0.02270	-0.08663	0.00364	-0.03772	-0.00033	-0.00205	-0.07474	0.00042	-0.00211	0.00005	-0.00182	0.00098
IP111007-5RVS	1.03360	7.41034	0.03951	4.75571	0.04744	0.09431	7.74003	0.04778	0.93413	0.04851	0.04387	0.05083
IP111007-5LCS	0.95062	33.66260	0.42545	37.03936	0.45413	0.93023	33.07053	0.46352	0.00158	0.45221	0.45931	0.44866
1109362-1	106.75245	10.73646	0.04899	17.15223	1.77360	0.51507	0.27570	0.04042	2.69909	0.16363	0.15956	0.16566
1109362-1D	103.13499	10.21405	0.04693	16.60785	1.76995	0.51443	0.25597	0.03926	2.59064	0.15289	0.15112	0.15378
1109362-1L 5X	20.75180	1.77556	0.01136	3.64024	0.38029	0.10859	-0.00335	0.00841	0.58965	0.03492	0.03546	0.03465
CCV	19.82796	48.23314	0.48345	50.76684	0.94391	0.95838	48.70871	0.95935	5.16861	0.97361	0.96987	0.97548
CCB	0.01559	-0.02949	0.00387	-0.00745	0.00010	-0.00110	-0.05395	-0.00104	-0.00118	-0.00025	-0.00148	0.00037
1109362-1MS	116.30181	49.26784	0.52056	55.79010	2.32015	1.41671	36.60231	0.47569	2.77737	0.59743	0.60261	0.59485
1109362-1MSD	103.93308	50.07021	0.53704	56.07924	2.23642	1.42904	37.80502	0.49348	2.59111	0.60291	0.60645	0.60114
1109362-2	92.07657	9.89885	0.04567	15.72275	1.81343	0.48837	0.25419	0.03758	2.48039	0.14965	0.14867	0.15014
1109362-3	103.84960	6.91146	0.03545	11.57320	1.60832	0.43459	0.21382	0.03100	1.97473	0.13654	0.13544	0.13709
1109362-4	93.67153	8.23317	0.03476	12.81245	1.60544	0.14504	0.13874	0.03760	2.06295	0.08763	0.08465	0.08912
1109362-5	77.10061	9.35630	0.03249	13.76195	1.31973	0.00528	0.09763	0.04414	2.06131	0.05361	0.04981	0.05550
1109362-6	113.56140	16.35918	0.04857	18.41625	2.00677	0.00670	0.16332	0.06752	3.16706	0.07674	0.07138	0.07942
1109362-7	100.57905	12.59200	0.04497	17.73873	1.74528	0.00551	0.50481	0.06581	2.69500	0.06812	0.06418	0.07009
1109362-8	66.40050	8.72057	0.02716	10.94176	1.16436	0.01121	0.07481	0.03601	2.04497	0.05057	0.04658	0.05256
1109362-9	87.36262	14.24941	0.03933	19.87038	1.57148	0.03373	0.22474	0.04509	3.69226	0.06825	0.06680	0.06898
CCV	19.98896	48.56076	0.48719	51.18439	0.95036	0.96671	49.09823	0.96822	5.19748	0.97261	0.97883	0.96951
CCB	0.02956	-0.03514	0.00388	-0.00025	0.00046	-0.00137	-0.05024	-0.00104	0.00470	-0.00062	L-0.00532	0.00173
1109362-10	75.65215	7.85046	0.02991	12.71441	1.45819	0.12471	0.11079	0.03012	2.23158	0.09090	0.08767	0.09252
1109362-11	175.01333	7.17965	0.07232	26.44689	1.55367	0.37944	0.12338	0.03054	2.03423	0.11914	0.11652	0.12045
1109362-12	58.48082	8.37203	0.02551	9.90237	1.16071	0.00307	0.13273	0.03595	1.74867	0.07056	0.06814	0.07176
1109362-13	74.76280	10.45042	0.03043	11.47916	1.28182	0.00334	0.09280	0.04231	2.12914	0.06242	0.05826	0.06449
1109362-14	138.14189	13.61038	0.03228	14.43352	3.70566	0.00589	0.12771	0.04797	2.98238	0.08537	0.08408	0.08601
IP111007-3MB	0.06346	-0.07443	0.00365	-0.02948	0.00127	-0.00252	-0.08104	-0.00227	-0.00015	-0.00102	L-0.00313	0.00003
IP111007-3RVS	0.96317	7.53081	0.04103	4.91052	0.04670	0.09390	7.94519	0.04867	1.02750	0.04751	0.04691	0.04782
IP111007-3LCS	0.00350	-0.07026	0.00365	-0.03401	-0.00017	-0.00140	-0.07855	-0.00190	10.08259	-0.00155	-0.00091	-0.00186
1110025-1 10X	0.00542	46.90210	0.00815	0.63605	-0.00001	-0.00208	5.41468	-0.00033	19.89971	-0.00106	0.00057	-0.00188
1110025-1D 10X	0.00168	46.68654	0.00814	0.64182	-0.00009	-0.00249	5.38016	-0.00068	19.87354	-0.00193	-0.00210	-0.00184
CCV	20.01871	48.11896	0.48349	51.14128	0.95182	0.97804	48.57706	0.98993	5.17597	0.96702	0.98731	0.95689
CCB	0.01253	-0.04699	0.00384	-0.00951	0.00007	-0.00123	-0.05546	-0.00186	0.00032	-0.00117	-0.00231	-0.00060
1110025-1L 50X	0.00236	8.33490	0.00455	0.12144	-0.00009	-0.00137	0.85795	-0.00064	3.98649	-0.00080	-0.00052	-0.00094
1110025-1MS 10X	0.00412	47.40151	0.00827	0.65191	0.00003	-0.00134	5.49773	-0.00142	20.92710	-0.00220	L-0.00302	-0.00179
1110025-1MSD 10X	0.00018	47.47118	0.00825	0.64821	-0.00017	-0.00218	5.49921	-0.00125	21.31238	-0.00117	-0.00182	-0.00085
1110025-2 5X	0.01782	102.10784	0.01391	1.31480	0.00061	-0.00191	12.29174	0.00002	21.82474	0.00055	-0.00025	0.00095
1110025-3 5X	0.02701	51.29483	0.01324	2.13251	0.00151	-0.00212	10.97055	-0.00037	26.50920	-0.00048	-0.00084	-0.00031
1110025-4 5X	0.01907	98.16888	0.01377	1.34591	0.00003	-0.00090	12.06296	-0.00039	42.31839	-0.00089	-0.00109	-0.00079
1110025-5 5X	0.00261	45.20199	0.01282	1.26762	-0.00029	-0.00151	10.52005	-0.00039	20.99933	-0.00066	L-0.00361	0.00081
1110025-6 5X	0.00069	87.92264	0.01360	1.33994	-0.00025	-0.00147	11.77421	-0.00132	21.07828	0.00007	-0.00058	0.00040
1110025-7 5X	-0.00050	88.54948	0.01373	1.37064	0.00003	-0.00069	11.91304	0.00069	42.64317	0.00027	0.00065	0.00007
1110025-8 5X	-0.00756	96.75875	0.01344	0.21718	-0.00044	-0.00205	11.92579	-0.00047	34.36039	0.00014	0.00033	0.00004

Sample Id1	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Pb I	Pb II
CCV	20.10906	48.33720	0.48676	51.34944	0.95471	0.98224	48.75600	1.00171	5.20854	0.97455	0.99126	0.96621
CCB	0.02229	-0.03130	0.00398	0.01540	0.00053	-0.00025	-0.03480	-0.00076	0.00331	0.00014	-0.00029	0.00035
1110025-9 5X	0.00241	99.85580	0.01362	0.18939	-0.00001	-0.00117	12.00152	-0.00082	16.06520	-0.00030	-0.00089	-0.00001
1110025-10 5X	-0.00330	49.44963	0.01275	0.45585	-0.00052	-0.00239	10.54274	-0.00135	15.21509	-0.00232	L-0.00389	-0.00153
1110025-11 5X	-0.00356	96.93728	0.01328	0.30676	-0.00025	-0.00184	11.85756	0.00042	35.65469	-0.00027	-0.00255	0.00088
1110025-12 5X	-0.00553	44.31758	0.01259	0.93513	-0.00048	-0.00110	10.28818	-0.00116	17.08112	0.00001	-0.00155	0.00079
1110025-13 5X	-0.00657	87.34729	0.01335	0.10538	-0.00033	-0.00127	11.68447	-0.00107	14.60622	-0.00102	L-0.00350	0.00021
1110025-14 5X	-0.00657	87.14950	0.01349	0.66715	-0.00017	-0.00218	11.72194	-0.00120	35.89739	-0.00052	L-0.00304	0.00074
IP111010-2MB	-0.01031	-0.07105	0.00364	-0.04040	-0.00075	-0.00228	-0.07617	-0.00236	0.00481	-0.00150	-0.00171	-0.00140
IP111010-2RVS	0.94528	7.42738	0.04085	4.88430	0.04650	0.09366	7.86928	0.04817	0.99792	0.04555	0.04932	0.04367
IP111010-2LCS	-0.00891	35.01625	0.43637	38.49745	0.00073	-0.00167	34.76725	-0.00239	9.84397	-0.00069	0.00014	-0.00110
1110088-1 2X	-0.00849	25.25682	0.02630	32.48308	0.00116	0.38679	45.86709	0.00012	0.60990	-0.00128	-0.00071	-0.00157
CCV	19.55957	48.14265	0.48468	50.27587	0.92765	0.96135	48.26996	0.97881	5.06609	0.94605	0.96174	0.93821
CCB	0.01497	-0.06021	0.00385	0.00058	0.00022	-0.00062	-0.04676	-0.00019	0.00251	0.00019	0.00103	-0.00022
1110088-1D 2X	-0.00439	25.32752	0.02644	32.89284	0.00131	0.38974	46.25103	-0.00074	0.60597	-0.00242	L-0.00601	-0.00062
1110088-1L 10X	-0.00730	3.98249	0.00729	6.64066	-0.00021	0.07948	7.97923	-0.00168	0.12132	-0.00106	-0.00221	-0.00049
1110088-1MS 2X	-0.00720	44.62492	0.27014	51.47879	0.00182	0.38403	64.52324	-0.00067	5.43104	-0.00137	-0.00256	-0.00078
1110088-1MSD 2X	-0.00792	45.39363	0.27522	52.46441	0.00186	0.38944	65.58129	-0.00031	5.55449	0.00017	0.00105	-0.00027
1110088-2 2X	-0.00912	24.99999	0.02598	32.50192	0.00116	0.38573	45.63192	0.00012	0.59752	-0.00116	-0.00029	-0.00159
1110088-3 2X	-0.00860	25.19814	0.02615	32.72700	0.00116	0.38679	46.02606	-0.00131	0.81173	-0.00161	L-0.00494	0.00005
1110088-4 2X	-0.01020	25.02049	0.02589	32.09644	0.00073	0.38305	45.63362	0.00034	0.16829	-0.00152	L-0.00568	0.00056
1110088-5 2X	-0.00823	25.53533	0.02637	32.65560	0.00209	0.38961	46.56564	-0.00079	0.16933	-0.00004	-0.00190	0.00089
1110088-6 2X	-0.00164	25.57234	0.02643	33.16780	0.00752	0.39243	46.57457	-0.00065	5.46996	-0.00110	L-0.00361	0.00015
1110088-7 2X	-0.00901	15.48001	0.02629	33.02938	0.00174	0.39352	46.04744	-0.00031	1.37671	-0.00108	0.00238	-0.00281
CCV	20.12958	48.10480	0.48821	51.48788	0.95910	0.97814	48.58122	0.97719	5.14473	0.97662	0.99219	0.96885
CCB	0.01928	-0.05896	0.00392	0.01025	0.00038	0.00016	-0.03187	-0.00049	-0.00095	-0.00002	L-0.00336	0.00165
1110088-8 2X	-0.00361	15.43861	0.02638	32.82834	0.00225	0.39172	45.99309	-0.00006	1.37334	-0.00031	-0.00299	0.00102
1110088-9 2X	-0.00507	15.39966	0.02624	32.75401	0.00291	0.39100	45.84368	-0.00045	3.02287	-0.00056	-0.00152	-0.00009
1110088-10 2X	-0.00969	16.85155	0.02646	33.99984	0.00038	0.40518	46.86957	-0.00098	0.41189	-0.00115	-0.00185	-0.00080
1110088-11 2X	-0.00989	16.72116	0.02636	33.67993	0.00034	0.40056	46.91624	-0.00104	0.42276	-0.00111	-0.00198	-0.00068
1110088-12 2X	0.00822	16.01518	0.02669	34.70479	0.00553	0.41348	47.72067	-0.00018	8.33798	-0.00006	0.00022	-0.00019
1110088-13 5X	-0.00138	85.31291	0.01313	1.31460	-0.00033	-0.00015	11.21407	0.00052	41.86034	-0.00117	0.00267	L-0.00308
1110088-14 5X	0.30454	86.40924	0.01360	1.31625	0.00014	-0.00069	11.77487	-0.00123	42.87789	-0.00006	0.00092	-0.00055
1110088-15 2X	-0.00818	25.53698	0.02641	33.13953	0.00163	0.39121	46.79732	0.00057	0.37907	-0.00021	-0.00029	-0.00017
1110088-16 2X	-0.00844	25.39741	0.02628	32.93619	0.00147	0.38770	46.41493	-0.00036	0.36948	-0.00093	-0.00264	-0.00008
1110088-17 2X	-0.00782	25.65688	0.02655	33.27252	0.00135	0.39257	46.78316	-0.00006	0.35249	-0.00090	-0.00018	-0.00126
CCV	19.97671	48.09176	0.48790	51.22856	0.95028	0.96981	48.55299	0.97417	5.08676	0.96891	0.97963	0.96356
CCB	0.01985	-0.05603	0.00392	0.01046	0.00038	-0.00005	-0.03338	0.00005	0.00285	-0.00050	0.00010	-0.00080
1110088-18 2X	-0.00730	25.40154	0.02639	32.67591	0.00096	0.39430	46.35391	0.00033	0.12120	-0.00044	-0.00103	-0.00014
1110088-19 2X	-0.00870	25.42240	0.02635	32.55489	0.00085	0.39355	46.22571	-0.00056	0.12166	-0.00123	L-0.00321	-0.00024
1110088-20 2X	-0.01047	25.61750	0.02648	32.53249	0.00139	0.39199	46.47183	-0.00003	0.11878	-0.00054	-0.00255	0.00047
IP1110110-3MB	-0.00610	-0.11994	0.00358	-0.03566	-0.00071	-0.00198	-0.06529	-0.00209	-0.00280	-0.00244	-0.00251	-0.00241
IP1110110-3RVS	0.96480	7.54156	0.04177	4.98483	0.04713	0.09590	8.06843	0.04942	0.99943	0.04712	0.05026	0.04556
IP1110110-3LCS	0.92081	35.40256	0.44760	39.03363	0.45621	0.92405	35.44666	0.46749	9.81484	0.46445	0.47408	0.45964
1110039-1	0.08880	3.23936	0.02259	55.48236	0.00248	0.01240	85.11981	-0.00128	0.01046	0.00084	0.00035	0.00109
1110039-2	-0.00232	1.72368	0.01994	40.34290	0.00026	0.00473	56.38736	-0.00082	0.00781	-0.00088	-0.00055	-0.00104
1110039-3	0.15504	0.94013	0.00430	2.07335	0.00237	-0.00195	2.17096	-0.00159	0.03191	-0.00098	-0.00273	-0.00011
1110039-3D	0.14538	0.93968	0.00431	2.08366	0.00260	-0.00025	2.15183	0.00000	0.03883	-0.00184	0.00458	L-0.00505
CCV	19.91839	47.86395	0.48575	51.11000	0.94691	0.96995	48.52456	0.97350	4.96518	0.96734	0.98028	0.96087
CCB	0.01756	-0.09453	0.00382	0.00675	0.00026	0.00036	-0.04165	-0.00099	0.00158	0.00032	-0.00134	0.00115



Sample Id1	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Pb I	Pb II
1110039-3L 5X	0.02436	0.08085	0.00374	0.38686	-0.00005	-0.00195	0.34510	-0.00153	0.00389	-0.00081	-0.00159	-0.00042
1110039-3MS	1.10197	37.23697	0.45529	41.49885	0.46317	0.94217	38.59267	0.47892	9.85568	0.47047	0.47884	0.46629
1110039-3MSD	1.07773	37.26411	0.45518	40.98324	0.45460	0.92545	38.41355	0.47264	9.77730	0.46265	0.46994	0.45902
1110053-1	0.06860	13.80126	0.01913	13.90400	0.00615	0.00490	78.83954	0.00091	2.99059	-0.00012	0.00077	-0.00056
1110053-2	0.08449	14.24212	0.01956	14.29765	0.00674	0.00385	80.86691	0.00009	3.10587	-0.00058	L-0.00533	0.00179
1110088-21 2X	-0.00974	15.48801	0.02628	32.86478	0.00178	0.38872	46.22902	-0.00019	0.98180	-0.00020	0.00020	-0.00039
1110088-22 2X	-0.01005	15.27514	0.02596	32.56411	0.00151	0.38614	45.59834	-0.00045	0.98875	-0.00091	-0.00080	-0.00096
1110088-23 2X	-0.00984	15.40232	0.02614	32.76469	0.00147	0.38849	45.97634	0.00002	0.72254	-0.00060	-0.00181	0.00000
1110088-24 2X	-0.00818	16.87491	0.02637	33.77902	0.00053	0.40140	46.99342	-0.00055	0.25222	-0.00001	0.00074	-0.00039
1110088-25 2X	-0.01015	16.53213	0.02610	33.38981	0.00057	0.39630	46.40555	0.00012	0.26181	-0.00140	-0.00191	-0.00114
CCV	19.94772	48.05211	0.48744	51.11001	0.94648	0.97449	48.39063	0.98211	4.98500	0.96508	0.98117	0.95705
CCB	0.01736	-0.07522	0.00386	0.00737	0.00026	-0.00015	-0.03592	-0.00065	-0.00164	-0.00047	-0.00160	0.00010
1110088-26 2X	-0.00424	15.55354	0.02600	33.54167	0.00088	0.39750	46.43677	0.00077	0.11405	-0.00063	-0.00258	0.00034
1110088-27 5X	-0.00922	85.05714	0.01307	0.61670	-0.00048	-0.00066	11.18235	-0.00086	35.99066	0.00032	-0.00086	0.00090
1110088-28 5X	0.00355	83.88522	0.01329	0.69208	-0.00040	-0.00056	11.40155	-0.00079	36.76709	-0.00029	-0.00060	-0.00013
1109372-1 10X	0.09119	0.19155	0.00637	5.13119	0.00603	-0.00167	5.00527	-0.00137	0.00205	-0.00106	-0.00142	-0.00087
1109372-1D 10X	0.08776	0.18805	0.00634	5.06307	0.00588	-0.00117	4.90532	-0.00107	0.00424	-0.00124	L-0.00363	-0.00004
1109372-1L 50X	0.01704	-0.03627	0.00412	1.00393	0.00085	-0.00215	0.86515	-0.00154	-0.00337	0.00055	-0.00084	0.00125
1109372-1A 10X	0.09176	0.17845	0.00639	5.20592	0.00607	-0.00171	5.08592	-0.00168	-0.00095	-0.00022	-0.00109	0.00022
1109301-1 10X	30.70324	0.59636	0.00540	1.05687	6.85828	0.04027	0.30428	0.00768	0.41883	0.01030	0.01066	0.01012
1109301-1D 10X	41.41400	0.82759	0.00601	1.39866	8.47874	0.05014	0.34823	0.00950	0.53585	0.01237	0.01064	0.01323
1109301-1L 50X	5.97446	0.04561	0.00398	0.18033	1.38717	0.00640	-0.00011	0.00101	0.08140	0.00207	0.00124	0.00249
CCV	19.82474	47.88386	0.48562	50.89341	0.93975	0.96541	48.64507	0.97767	4.94726	0.95864	0.97544	0.95025
CCB	0.00557	-0.07387	0.00382	-0.01651	-0.00009	-0.00029	-0.05422	-0.00123	-0.00199	0.00003	L-0.00359	0.00184
1109301-1MS 10X	35.02653	3.89437	0.04463	5.45781	7.22022	0.14358	3.69586	0.06076	0.45432	0.06143	0.05826	0.06301
1109301-1MSD 10X	26.02460	3.27218	0.03870	4.62383	5.68035	0.12366	3.12499	0.05225	0.34440	0.05399	0.05274	0.05461
1109301-1A	H315.54738	47.23735	0.50091	47.81143	H59.81965	1.33704	41.40907	0.54798	3.87829	0.54335	0.55360	0.53823
1109363-1A	174.42720	29.51660	0.13043	42.64454	3.37523	1.03942	1.60958	0.56950	4.75452	0.64446	0.65949	0.63695
1109363-12 5X	44.12296	4.36347	0.02465	9.24292	0.46953	0.03664	0.19691	0.02409	1.01207	0.05697	0.05282	0.05905
1109362-1A	104.80736	10.41305	0.04798	16.74118	2.16725	1.41976	0.31658	0.50391	2.56512	0.59877	0.60996	0.59318
1110088-4	0.00158	54.09147	0.05234	63.55349	0.00252	0.76384	96.19228	-0.00037	0.34024	-0.00036	-0.00069	-0.00020
1110088-5	-0.00382	55.06539	0.05326	64.38523	0.00436	0.77066	97.20084	-0.00087	0.34740	-0.00024	-0.00135	0.00031
1110088-18	-0.00912	54.61781	0.05288	64.03195	0.00221	0.76664	96.18615	0.00021	0.24206	-0.00012	0.00068	-0.00051
1110088-19	-0.00839	54.42280	0.05268	64.13680	0.00248	0.76919	95.62711	0.00058	0.24067	-0.00100	-0.00013	-0.00143
CCV	19.77723	47.93888	0.48521	50.85875	0.93671	0.96292	48.12791	0.97440	4.93314	0.95517	0.97652	0.94452
CCB	0.00853	-0.06551	0.00386	0.00861	0.00010	-0.00035	-0.02736	-0.00102	0.00205	0.00024	-0.00164	0.00117
1110088-20	-0.00989	54.90230	0.05320	63.95773	0.00283	0.76831	96.27070	0.00049	0.23305	-0.00113	L-0.00322	-0.00009
1110088-26	0.00018	34.14286	0.05240	67.13595	0.00244	0.79445	96.11217	0.00060	0.24795	-0.00022	0.00345	-0.00205
1109301-1A 10X	32.27229	0.64870	0.00550	1.12073	7.39990	0.97480	0.41157	0.49590	0.36855	0.46452	0.47831	0.45764
CRI	0.21076	3.83604	0.02001	5.37893	0.03241	0.02108	4.18932	0.08643	0.20188	0.00670	0.00500	0.00755
ICSA	108.38984	-0.10526	0.00402	275.50513	0.00166	-0.00167	-0.02724	0.00017	0.00228	-0.00053	L-0.01080	0.00459
ICSAB	105.22134	-0.12603	1.01523	268.70432	0.45719	0.94572	-0.04995	0.95505	0.98168	0.04615	0.03706	0.05068
CCV	19.58091	47.52983	0.48085	50.37157	0.92230	0.95572	48.10262	0.97995	4.91000	0.94047	0.96578	0.92783
CCB	0.01388	-0.06088	0.00386	0.01314	0.00003	-0.00022	-0.05074	-0.00114	0.00262	-0.00086	-0.00020	-0.00118

Sample Id1	S	Sb	Se	Se I	Se II	Si	Sn	Sr	Th	Ti	Tl	U
MIXBHGH	0.01267	1.98509	4.95006	4.96423	4.94298	49.40146	9.97202	9.92188	1.95999	9.79062	H5.03055	-0.05675
MIXAHGH	0.01267	0.00142	-0.00066	L-0.02413	0.01105	-0.01242	0.00182	0.00831	-0.02126	0.00110	-0.00288	0.11760
MIXCHGH	H50.06927	0.00166	-0.00099	0.00003	-0.00150	L-0.05732	0.01968	-0.00127	0.09070	0.00728	0.00175	H50.19446
ICV	2.60107	0.25155	0.50947	0.51756	0.50543	2.54145	0.53133	0.24920	0.17893	0.24857	0.26214	2.49564
ICB	0.00975	-0.00169	0.00158	0.00250	0.00111	-0.01186	-0.00014	-0.00247	-0.00321	-0.00134	-0.00043	-0.01205
CRI	0.21083	0.12141	0.01118	0.01132	0.01111	0.09936	0.11119	0.01900	0.01245	0.02063	0.02079	0.18113
ICSA	0.05783	0.00053	-0.00603	L-0.01871	0.00030	-0.02064	-0.00015	-0.00153	-0.04003	0.00016	-0.00198	0.04823
ICSAB	1.06226	0.58140	0.04711	0.03418	0.05356	0.92920	1.03111	0.96795	0.06786	0.92750	0.09735	9.62672
CCV	5.23830	0.49755	1.01910	1.02937	1.01397	4.97289	1.06156	0.49803	0.35985	0.48763	0.52468	4.89525
CCB	-0.00045	-0.00252	-0.00072	0.00098	-0.00157	-0.01673	-0.00175	-0.00271	-0.00596	-0.00154	0.00139	-0.01580
F111006-1MB	-0.01647	-0.00242	-0.00025	0.00160	-0.00118	0.02499	0.00093	-0.00267	-0.00115	-0.00170	0.00311	-0.01636
F111006-1RVS	1.00246	0.09802	0.05037	0.05244	0.04934	0.26816	0.10312	0.04580	-0.00236	0.04603	0.10323	0.47233
F111006-1LCS	9.93983	0.48275	1.94311	1.95537	1.93699	2.02453	0.51407	0.48373	-0.00054	0.47086	1.97900	-0.02484
1109351-1	21.22737	-0.00166	0.00182	0.00317	0.00115	3.11195	-0.00139	0.18804	-0.00184	-0.00129	0.00062	-0.01724
1109351-2	20.91401	-0.00272	-0.00018	-0.00087	0.00017	3.08068	0.00004	0.18611	-0.00405	-0.00140	0.00294	-0.01984
1109351-4	20.25481	-0.00228	-0.00202	L-0.00692	0.00042	2.97466	0.00004	0.18194	-0.00649	-0.00199	0.00129	-0.01867
1109351-5	20.15344	-0.00040	-0.00252	-0.00120	-0.00318	3.04692	0.00075	0.17792	-0.00447	-0.00178	0.00025	-0.00886
1109381-1	9.39033	-0.00076	-0.00102	-0.00256	-0.00025	3.20459	-0.00122	0.11647	-0.01768	-0.00067	0.00252	-0.01326
1109381-1D	9.28578	-0.00014	0.00005	-0.00036	0.00026	3.17837	0.00361	0.11582	-0.01893	-0.00067	0.00649	-0.00490
1109381-1L 5X	1.80213	-0.00146	-0.00198	0.00216	-0.00404	0.62209	0.00254	0.02078	-0.00291	-0.00155	0.00139	-0.01291
CCV	5.21485	0.50169	1.01052	1.01981	1.00588	4.92316	1.05978	0.49712	0.35593	0.47896	0.52784	4.86328
CCB	-0.00773	-0.00180	-0.00092	-0.00142	-0.00067	-0.01491	-0.00032	-0.00262	-0.00123	-0.00138	0.00366	-0.01378
1109381-1MS	19.31606	0.48642	1.99580	2.01597	1.98573	5.21761	0.51461	0.60410	-0.01113	0.46191	2.00350	-0.01537
1109381-1MSD	19.79276	0.49626	2.02665	2.05219	2.01389	5.30063	0.51872	0.61565	-0.01350	0.46965	2.03172	-0.01797
1109382-1	33.26595	-0.00302	-0.00229	L-0.00750	0.00031	4.14234	0.00004	1.18119	-0.00391	-0.00136	0.00109	-0.02169
1109382-2	0.44984	0.00036	-0.00141	0.00069	-0.00246	5.48119	-0.00069	0.13536	0.00092	0.01064	0.00031	-0.02167
1109382-4	31.79566	-0.00257	-0.00260	-0.00429	-0.00176	4.07765	0.00004	1.14060	-0.00611	-0.00200	0.00333	-0.02098
1109382-5	0.42652	-0.00240	0.00005	-0.00043	0.00029	4.18406	-0.00122	0.12313	-0.00018	-0.00023	0.00379	-0.01354
1110028-10	7.21635	-0.00169	-0.00177	0.00103	-0.00317	4.18046	-0.00104	0.35439	-0.01131	-0.00203	0.00106	-0.02329
1110028-11	21.29603	-0.00174	-0.00183	0.00379	-0.00463	3.04692	-0.00121	0.33291	-0.00393	-0.00190	0.00279	-0.01117
1110028-12	0.06511	-0.00142	-0.00172	-0.00042	-0.00237	6.09407	-0.00139	0.28260	-0.00226	-0.00173	0.00227	-0.01959
1110028-13	0.04035	-0.00475	-0.00065	L-0.00526	0.00166	9.65150	-0.00336	0.24835	-0.00334	-0.00186	-0.00171	-0.02500
CCV	5.18261	0.49972	1.00442	1.01744	0.99792	4.88428	1.06678	0.49822	0.35236	0.47240	0.53403	4.84401
CCB	0.00247	-0.00141	-0.00127	-0.00131	-0.00125	-0.01587	-0.00193	-0.00242	0.00148	-0.00128	0.00248	-0.01407
1110028-14	32.49954	-0.00013	-0.00264	-0.00456	-0.00168	4.03133	-0.00229	1.18406	-0.00589	-0.00205	0.00093	-0.01262
1110028-15	20.76930	0.00020	0.00094	0.00008	0.00137	4.09414	-0.00086	0.52019	-0.01100	-0.00184	0.00202	-0.01983
1110035-9	17.96480	-0.00173	-0.00190	-0.00227	-0.00172	4.57277	-0.00193	0.08790	-0.00039	-0.00181	-0.00035	-0.01983
1110035-10	22.24731	-0.00182	-0.00231	-0.00109	-0.00292	2.98735	0.00004	0.14187	-0.00011	-0.00168	-0.00317	-0.02127
1110035-11	1.54960	-0.00180	0.00069	0.00237	-0.00014	6.22632	-0.00282	0.27522	-0.00742	-0.00057	0.00128	-0.02017
1110035-12	14.04168	-0.00118	-0.00051	-0.00243	0.00046	4.42824	0.00093	1.04692	-0.00639	-0.00183	0.00297	-0.01665
IP111007-2MB	-0.02813	-0.00159	-0.00147	-0.00076	-0.00183	-0.01528	-0.00104	-0.00311	-0.00132	-0.00141	0.00452	-0.01955
ZZZ	-0.01793	-0.00196	0.00147	0.00501	-0.00029	-0.01358	0.00627	-0.00211	-0.00192	0.01846	0.00578	-0.01900
IP111007-2LCS	9.94720	0.49248	1.97362	2.01204	1.95444	1.96559	0.52124	0.48067	0.00375	0.46067	1.98656	-0.02166
IP111007-2LCSD	10.00025	0.48980	1.98467	2.02089	1.96658	1.99200	0.51999	0.47939	0.00440	0.45722	1.97796	-0.01530
13061426	5.12838	0.50409	1.00003	1.01591	0.99211	4.85987	1.06517	0.49737	0.35331	0.46731	0.53606	4.83389
CCB	0.00101	-0.00296	-0.00192	-0.00109	-0.00234	-0.01624	-0.00122	-0.00253	0.00113	-0.00145	0.00039	-0.01436
1109372-1	H221.89656	-0.00211	-0.00009	0.00140	-0.00084	7.88623	0.00093	2.82800	-0.03013	-0.00221	0.00580	0.01474
1109372-1D	H216.53492	-0.00227	0.00045	-0.00016	0.00075	7.70743	0.00147	2.76511	-0.03726	-0.00235	0.00065	0.01908
1109372-1L 5X	44.06250	-0.00247	-0.00173	0.00254	-0.00386	1.59494	0.00254	0.57265	-0.00769	-0.00182	0.00060	-0.00669
1109372-1A	H237.30266	0.47576	2.00742	2.03136	1.99547	9.57487	0.50998	3.21560	-0.02652	0.44137	2.00406	0.00777



Sample Id1	S	Sb	Se	Se I	Se II	Si	Sn	Sr	Th	Ti	Tl	U
1109372-2	H215.69885	0.00035	0.00083	0.00170	0.00040	7.58958	0.00057	2.72702	-0.03271	-0.00210	0.00055	0.01195
1109372-3	H234.26680	-0.00150	0.00245	0.00161	0.00288	6.56599	-0.00103	3.15635	-0.03138	-0.00260	0.00057	0.03287
1109372-4	H234.89748	-0.00177	0.00453	0.00212	0.00573	6.57480	-0.00211	3.13363	-0.03746	-0.00266	0.00284	0.04511
1109372-5	H116.77156	-0.00035	-0.00195	0.00157	-0.00370	3.47311	0.00165	2.26687	-0.02928	-0.00230	0.00534	0.07780
1109372-6	H247.66094	-0.00094	0.00079	-0.00063	0.00151	7.24613	0.00057	3.50545	-0.03267	-0.00276	0.00097	0.04707
1110028-1	7.47789	-0.00180	0.00107	0.00614	-0.00146	4.27556	0.00129	0.36168	-0.00803	-0.00159	-0.00230	-0.01580
CCV	5.12398	0.50069	0.99512	1.00769	0.98885	4.81835	1.07253	0.49525	0.34774	0.46016	0.53798	4.78595
CCB	0.01849	0.00070	0.00192	0.00244	0.00166	-0.01856	0.00129	-0.00215	0.00205	-0.00138	0.00158	-0.00830
1110028-2	20.32488	-0.00075	0.00000	0.00214	-0.00107	3.12513	0.00004	0.36042	0.00160	-0.00033	0.00239	-0.01589
1110028-4	0.04909	-0.00208	0.00006	0.00133	-0.00057	6.26911	-0.00104	0.29506	-0.00138	-0.00062	0.00629	-0.02166
1110028-5	0.12777	-0.00166	-0.00112	0.00116	-0.00225	9.88039	-0.00372	0.25361	0.00051	-0.00145	0.00668	-0.01226
1110028-7	32.46327	-0.00286	-0.00274	-0.00251	-0.00285	4.00072	-0.00068	1.15339	-0.00379	-0.00174	0.00618	-0.01965
1110028-8	21.08411	0.00047	-0.00092	-0.00010	-0.00132	4.17985	0.00200	0.51549	-0.01422	-0.00095	0.00255	-0.01418
1110035-1	18.48095	-0.00246	-0.00228	-0.00479	-0.00103	4.70646	-0.00157	0.08926	0.00007	-0.00104	-0.00029	-0.01436
1110035-4	21.33036	-0.00270	-0.00322	L-0.00609	-0.00179	3.03466	-0.00014	0.15712	-0.00014	-0.00119	0.00440	-0.02678
1110035-5	1.58171	-0.00236	-0.00068	-0.00027	-0.00089	6.23475	-0.00229	0.27132	-0.00414	0.00021	0.00363	-0.01734
1110035-7	13.46003	-0.00303	-0.00086	L-0.00501	0.00122	4.37663	0.00057	1.09435	-0.00392	-0.00184	0.00156	-0.02041
IP111007-4MB	-0.01939	0.00036	-0.00144	-0.00082	-0.00175	-0.02727	0.01112	-0.00317	0.00687	-0.00232	-0.00585	-0.02418
CCV	5.06976	0.50128	0.99003	1.00620	0.98196	4.78823	1.06626	0.49417	0.34897	0.45498	0.53059	4.74552
CCB	0.00538	-0.00102	-0.00077	-0.00463	0.00115	-0.02282	-0.00175	-0.00248	0.00115	-0.00144	0.00020	-0.02013
IP111007-4RVS	0.86683	0.09440	0.03837	0.03365	0.04073	0.22912	0.09776	0.04511	0.00010	0.04377	0.09395	0.46656
IP111007-4LCS	-0.01793	0.46147	1.63541	1.66013	1.62306	1.67096	0.50085	0.48405	-0.02409	0.44590	1.98211	-0.02597
IP111007-4LCSD	-0.01793	0.45718	1.63933	1.66501	1.62650	1.66243	0.49692	0.47877	-0.02750	0.44194	1.98025	-0.03491
1109301-1	0.82745	-0.00035	0.01978	L-0.03032	0.04479	28.19127	0.00629	0.67622	0.06723	1.23189	L-0.01042	0.11753
1109301-1D	0.79974	0.00181	0.02337	L-0.03160	0.05082	33.31198	0.00827	0.84585	0.09035	1.52561	L-0.02287	0.16801
1109301-1L 5X	0.15982	0.00047	0.00011	L-0.01262	0.00647	5.92545	0.00278	0.13505	0.02354	0.25172	-0.00269	0.00832
1109301-1MS	0.67435	0.37345	1.66552	1.66416	1.66620	37.95152	0.50334	1.16448	0.04707	2.00001	1.93110	0.14174
1109301-1MSD	0.56354	0.35703	1.56211	1.55972	1.56331	31.18167	0.46537	0.97978	0.03328	1.70921	1.86221	0.09006
ZZZ	H129.15523	0.21775	-0.74572	L-2.14883	L-0.04521	22.47213	-0.04588	8.71147	H6.17289	0.60458	L-3.37896	L-28.72438
ZZZ	6.38673	0.00868	0.13516	0.11332	0.14606	3.66707	0.00958	2.55018	0.10627	0.24230	0.01422	0.98404
CCV	5.06976	0.49551	0.96818	0.98523	0.95966	4.74488	1.05461	0.48872	0.34476	0.45084	0.52873	4.69456
CCB	0.00538	0.00005	0.00130	0.00406	-0.00008	-0.01678	0.00200	-0.00182	0.00173	-0.00133	0.00167	-0.01322
ZZZ	26.92863	0.04386	-0.17088	L-0.48953	L-0.01180	3.85508	-0.00727	1.87416	1.41709	0.13348	L-0.74750	L-6.40082
ZZZ	6.11965	0.26724	1.74794	1.76559	1.73912	10.49610	0.49826	2.87368	0.10231	0.52003	1.92059	0.73959
ZZZ	4.94960	0.49529	0.96813	0.98645	0.95899	4.66394	1.04602	0.48649	0.34121	0.43789	0.53399	4.63196
ZZZ	-0.00190	-0.00057	0.00067	0.00093	0.00054	-0.01893	0.00361	-0.00193	0.00859	-0.00123	0.00459	-0.00688
CCV	5.24856	0.47916	1.00700	1.01626	1.00238	4.91685	1.04598	0.48641	0.34247	0.47458	0.51398	4.80920
CCB	0.00247	-0.00035	0.00144	0.00412	0.00010	-0.01175	-0.00104	-0.00222	-0.00061	-0.00126	0.00108	-0.01293
1109363-1	6.70380	0.00333	0.13910	0.11542	0.15093	5.99973	0.00759	2.57740	0.10752	0.26788	0.00612	1.00494
1109363-1D	6.35737	0.00496	0.13038	0.11328	0.13891	5.70953	0.01045	2.30144	0.11819	0.26400	0.00897	0.72361
1109363-1L 5X	1.40658	-0.00038	0.02883	0.02094	0.03277	1.06276	-0.00003	0.52359	0.02331	0.05372	0.00138	0.18822
1109363-1MS	6.40728	0.25857	1.80170	1.79861	1.80324	10.82850	0.49447	2.87421	0.10657	0.54714	1.88520	0.73303
1109363-1MSD	6.32655	0.27547	1.79443	1.78338	1.79994	8.27373	0.49432	2.79861	0.10024	0.52079	1.87156	0.76834
CCV	5.23977	0.48177	1.01121	1.00932	1.01216	4.92850	1.05924	0.48758	0.35535	0.47623	0.51979	4.78532
CCB	-0.02667	-0.00390	-0.00071	-0.00227	0.00006	-0.01699	-0.00086	-0.00288	-0.00548	-0.00158	0.00270	-0.01666
1109363-2	13.06951	0.00040	0.02593	0.01161	0.03308	4.14826	-0.00157	0.32066	0.05342	0.14586	-0.00336	0.41908
1109363-3	3.35542	0.00155	0.00896	-0.00007	0.01346	3.68097	0.00342	0.28549	0.05867	0.15997	0.00142	0.03502
1109363-4	3.38174	0.00197	0.00339	L-0.01546	0.01280	2.16774	0.00200	0.32969	0.06787	0.15614	0.00085	0.04496
1109363-5	3.18578	0.00120	0.00442	L-0.00930	0.01128	2.51030	0.00111	0.32069	0.07066	0.14650	-0.00292	0.03180
1109363-6	3.47097	0.00074	0.00898	L-0.00518	0.01605	5.73750	0.00235	0.29083	0.06790	0.16419	0.00161	0.04316

Sample Id1	S	Sb	Se	Se I	Se II	Si	Sn	Sr	Th	Ti	Tl	U
1109363-7	4.82799	-0.00062	0.00626	L-0.00753	0.01314	4.81783	-0.00194	0.37000	0.06830	0.15777	-0.00108	0.06881
1109363-8	5.63707	0.00184	0.02975	0.01969	0.03478	8.28736	0.00054	0.31939	0.06214	0.17748	-0.00143	0.16298
CCV	5.22071	0.48514	1.00529	1.00824	1.00383	4.88318	1.05943	0.48630	0.35003	0.46823	0.52362	4.75649
CCB	-0.02084	-0.00257	-0.00238	L-0.00547	-0.00084	-0.01635	-0.00175	-0.00263	-0.00218	-0.00151	0.00435	-0.01957
1109363-9	1.63571	0.00120	0.00179	L-0.00976	0.00756	8.36629	0.00376	0.19850	0.04758	0.17954	-0.00385	0.01859
1109363-10	3.10243	-0.00023	0.00451	L-0.00808	0.01080	10.77518	0.00106	0.31289	0.06528	0.19720	-0.00237	0.01977
1109363-11	2.71944	-0.00083	-0.00100	L-0.01779	0.00739	2.39053	0.00166	0.22648	0.05398	0.13736	-0.00036	0.02074
1109363-12	6.92406	0.00445	0.09632	0.07000	0.10947	7.13219	0.00997	1.14555	0.15554	0.21895	0.00824	0.35577
IP111007-5MB	-0.03687	-0.00186	-0.00075	-0.00261	0.00017	-0.01956	-0.00086	-0.00320	-0.00048	-0.00232	-0.00043	-0.02042
IP111007-5RVS	0.90620	0.08939	0.04066	0.03381	0.04408	0.24160	0.09865	0.04472	-0.00168	0.04478	0.09219	0.46163
IP111007-5LCS	-0.00773	0.44287	1.64528	1.67549	1.63020	1.71299	0.49101	0.46474	-0.02767	0.44304	1.93083	-0.02278
1109362-1	25.84041	0.00108	0.19836	0.18781	0.20362	13.38344	0.00373	0.38619	0.06428	0.20623	-0.00179	4.49422
1109362-1D	24.58121	0.00291	0.22322	0.21165	0.22899	3.00945	0.00413	0.37477	0.06588	0.16260	0.00319	4.35465
1109362-1L 5X	5.62681	-0.00082	0.04378	0.04195	0.04469	2.85571	-0.00145	0.07689	0.02197	0.04272	0.00082	0.91289
CCV	5.13131	0.47338	0.99397	0.98552	0.99819	4.80520	1.03864	0.47763	0.34546	0.46226	0.51258	4.69719
CCB	-0.01501	-0.00158	-0.00094	0.00053	-0.00168	-0.02123	0.00004	-0.00280	-0.00088	-0.00151	0.00139	-0.01580
1109362-1MS	28.02567	0.36777	1.83473	1.83629	1.83395	5.45814	0.47699	0.85552	0.05233	0.49228	1.85151	4.42263
1109362-1MSD	22.83022	0.38012	1.84053	1.85598	1.83281	7.03931	0.49558	0.85269	0.04146	0.51380	1.92052	4.32676
1109362-2	19.36819	0.00314	0.17297	0.16354	0.17767	4.30536	0.00181	0.36703	0.06580	0.16270	0.00177	4.75591
1109362-3	30.36239	0.00190	0.20527	0.19599	0.20990	11.10489	0.00089	0.19291	0.05989	0.18569	-0.00031	3.14984
1109362-4	14.29932	-0.00048	0.13516	0.12545	0.14000	15.97289	0.00130	0.17096	0.05300	0.29837	-0.00212	0.70361
1109362-5	2.83783	0.00149	0.00543	L-0.00928	0.01277	2.88427	0.00161	0.18529	0.05597	0.17811	-0.00396	0.02750
1109362-6	2.08248	0.00068	0.00535	L-0.01053	0.01329	9.36404	0.00961	0.24103	0.06647	0.37244	-0.00236	0.04422
1109362-7	1.40220	0.00200	0.01233	L-0.00564	0.02130	2.83268	0.00849	0.26075	0.06164	0.25827	0.00022	0.04325
1109362-8	1.75979	-0.00072	0.01533	0.00675	0.01961	7.48685	0.00171	0.22039	0.04286	0.25118	-0.00003	0.06797
1109362-9	8.73374	-0.00058	0.04137	0.02946	0.04732	19.43366	0.00482	0.31293	0.03883	0.34009	-0.00332	0.49664
CCV	5.18114	0.47955	0.99104	1.00175	0.98570	4.84490	1.04742	0.48229	0.34393	0.46552	0.51995	4.73816
CCB	-0.01939	-0.00230	-0.00073	0.00002	-0.00110	-0.01956	0.00093	-0.00269	0.00245	-0.00126	0.00098	-0.02331
1109362-10	14.14532	0.00119	0.15611	0.14803	0.16014	14.35058	0.00264	0.21218	0.04576	0.22104	-0.00102	0.95258
1109362-11	13.10205	0.00312	0.07748	0.05300	0.08971	4.16375	0.00152	0.31562	0.05405	0.10898	0.00867	0.89503
1109362-12	2.00508	-0.00157	0.01162	0.00256	0.01615	3.41635	0.00015	0.23214	0.03543	0.20820	0.00107	0.03787
1109362-13	1.40512	0.00209	0.00382	L-0.00705	0.00924	10.75459	0.00134	0.20705	0.04716	0.25875	-0.00342	0.02448
1109362-14	1.94083	0.00344	0.00568	L-0.01421	0.01561	5.32049	0.00221	0.15820	0.06211	0.28228	0.00050	0.03498
IP111007-3MB	-0.02667	-0.00231	-0.00153	-0.00088	-0.00185	-0.01544	-0.00157	-0.00308	0.00108	-0.00147	0.00423	-0.02045
IP111007-3RVS	0.98350	0.09284	0.04765	0.05047	0.04625	0.25606	0.10026	0.04412	-0.00191	0.04378	0.10222	0.46485
IP111007-3LCS	-0.02375	-0.00130	-0.00287	-0.00445	-0.00208	-0.01631	-0.00461	-0.00313	-0.00429	-0.00168	-0.00021	-0.01204
1110025-1 10X	3.05272	-0.00048	0.00031	0.00423	-0.00165	1.47282	-0.00497	0.03198	-0.00350	-0.00184	0.00134	-0.01637
1110025-1D 10X	3.05419	-0.00076	0.00086	0.00552	-0.00147	1.47078	-0.00336	0.03194	-0.00263	-0.00168	0.00352	-0.01868
CCV	5.19726	0.48516	0.99288	1.01440	0.98214	4.82149	1.05693	0.48343	0.34764	0.46107	0.52172	4.72107
CCB	-0.02230	-0.00158	-0.00277	-0.00406	-0.00212	-0.02026	0.00004	-0.00284	-0.00043	-0.00152	0.00343	-0.01811
1110025-1L 50X	0.61457	-0.00047	-0.00013	0.00189	-0.00114	0.28274	0.00075	0.00421	0.00138	-0.00157	0.00057	-0.01002
1110025-1MS 10X	3.07465	-0.00108	-0.00119	-0.00115	-0.00121	1.48410	-0.00229	0.03279	-0.00034	-0.00172	0.00393	-0.01724
1110025-1MSD 10X	3.12875	-0.00275	-0.00118	-0.00177	-0.00089	1.50144	-0.00139	0.03304	-0.00028	-0.00204	0.00534	-0.02156
1110025-2 5X	6.31188	-0.00115	-0.00016	0.00064	-0.00056	3.01873	-0.00229	0.06805	-0.00196	-0.00178	-0.00094	-0.01898
1110025-3 5X	6.31628	0.00041	-0.00187	-0.00115	-0.00223	3.03664	-0.00264	0.13011	-0.00058	-0.00186	0.00390	-0.01754
1110025-4 5X	6.54231	-0.00092	-0.00377	-0.00373	-0.00379	3.04300	0.00022	0.07041	-0.00011	-0.00185	0.00357	-0.02013
1110025-5 5X	6.51883	-0.00303	-0.00085	0.00076	-0.00165	3.03546	-0.00014	0.05932	-0.00252	-0.00195	0.00211	-0.01694
1110025-6 5X	6.48066	-0.00265	-0.00154	-0.00227	-0.00118	3.01420	-0.00050	0.07009	-0.00536	-0.00199	0.00029	-0.01666
1110025-7 5X	6.63333	0.00097	0.00008	0.00267	-0.00121	3.08394	-0.00354	0.07115	-0.00191	-0.00172	0.00321	-0.00483
1110025-8 5X	6.27959	-0.00148	-0.00170	-0.00456	-0.00027	3.00300	-0.00032	-0.00193	-0.00003	-0.00176	0.00393	-0.01232



Sample Id1	S	Sb	Se	Se I	Se II	Si	Sn	Sr	Th	Ti	Tl	U
CCV	5.18700	0.48984	0.99859	1.01959	0.98811	4.83829	1.06697	0.48752	0.35911	0.45968	0.53699	4.72188
CCB	-0.01501	-0.00035	-0.00110	0.00014	-0.00172	-0.01812	-0.00014	-0.00257	0.00184	-0.00125	0.00317	-0.01580
1110025-9 5X	6.20769	0.00136	-0.00173	-0.00299	-0.00110	2.94951	-0.00050	0.00466	0.00184	-0.00157	0.00002	-0.01117
1110025-10 5X	6.20769	-0.00131	-0.00185	-0.00210	-0.00172	2.97966	-0.00300	0.00007	0.00030	-0.00163	0.00074	-0.02271
1110025-11 5X	6.53057	-0.00092	-0.00185	-0.00137	-0.00209	3.02797	-0.00086	-0.00203	0.00336	-0.00175	0.00288	-0.01261
1110025-12 5X	6.36178	-0.00325	0.00354	0.00687	0.00187	2.97778	-0.00139	0.01827	-0.00107	-0.00183	-0.00035	-0.01867
1110025-13 5X	6.39847	-0.00147	-0.00210	-0.00373	-0.00129	2.96282	0.00129	-0.00214	-0.00258	-0.00196	-0.00086	-0.02271
1110025-14 5X	6.51883	-0.00349	0.00190	0.00647	-0.00038	3.04747	-0.00139	0.00177	-0.00170	-0.00178	-0.00058	-0.02011
IP111010-2MB	-0.02521	-0.00042	-0.00082	-0.00002	-0.00122	-0.02610	0.00039	-0.00320	-0.00075	-0.00175	0.00402	-0.01780
IP111010-2RVS	0.96162	0.09640	0.04679	0.04862	0.04588	0.25071	0.09686	0.04374	-0.00149	0.04315	0.10708	0.46284
IP111010-2LCS	-0.01647	-0.00292	-0.00248	-0.00182	-0.00281	-0.02621	-0.00211	-0.00298	-0.02870	-0.00129	0.00538	-0.01694
1110088-1 2X	H245.54178	0.00122	0.00848	0.01343	0.00601	8.86497	0.00022	1.95097	-0.02679	-0.00261	0.00088	-0.01694
CCV	5.12838	0.48159	0.98217	0.99882	0.97385	4.72845	1.04045	0.48050	0.33908	0.44790	0.52805	4.68782
CCB	-0.01356	-0.00030	-0.00151	-0.00232	-0.00110	-0.01631	-0.00300	-0.00272	-0.00323	-0.00155	0.00085	-0.00859
1110088-1D 2X	H250.69403	-0.00031	0.00958	0.00944	0.00965	9.05320	0.00361	1.96858	-0.03622	-0.00261	0.00388	-0.02819
1110088-1L 10X	49.66292	-0.00045	0.00183	0.00569	-0.00009	1.82815	0.00111	0.39867	-0.01058	-0.00203	0.00379	-0.02271
1110088-1MS 2X	H246.66575	0.00064	0.00900	0.00939	0.00881	8.85898	-0.00157	1.94140	-0.03377	-0.00227	-0.00021	-0.01377
1110088-1MSD 2X	H251.23149	0.00001	0.00754	0.00826	0.00718	9.03597	-0.00211	1.96591	-0.03631	-0.00241	0.00124	-0.02559
1110088-2 2X	H247.89310	0.00021	0.00966	0.01056	0.00921	8.95342	0.00093	1.94089	-0.02605	-0.00257	0.00042	-0.02098
1110088-3 2X	H249.05563	-0.00067	0.00889	0.00832	0.00917	9.00874	-0.00050	1.95335	-0.02928	-0.00254	0.00346	-0.03050
1110088-4 2X	H246.82512	-0.00171	0.01061	0.01209	0.00986	8.87987	0.00182	1.94532	-0.02407	-0.00230	0.00271	-0.00049
1110088-5 2X	H250.65918	0.00041	0.00864	0.01243	0.00674	9.04413	-0.00014	1.97852	-0.02912	-0.00254	0.00175	0.00095
1110088-6 2X	H251.30663	0.00060	0.01016	0.01127	0.00961	9.04841	0.00236	2.07264	-0.02811	-0.00266	0.00245	0.01739
1110088-7 2X	H251.24429	0.00077	0.01008	0.01502	0.00761	9.06370	-0.00372	2.02286	-0.03355	-0.00269	0.00353	0.00960
CCV	5.29840	0.47845	1.00875	1.02516	1.00057	4.87853	1.05728	0.48247	0.35267	0.46766	0.52498	4.75976
CCB	0.00538	-0.00362	-0.00128	-0.00440	0.00028	-0.01693	-0.00139	-0.00244	-0.00106	-0.00137	0.00057	-0.02273
1110088-8 2X	H249.35424	0.00032	0.00934	0.00828	0.00987	9.00276	-0.00121	2.02189	-0.02600	-0.00259	-0.00107	-0.00944
1110088-9 2X	H248.22801	0.00103	0.00979	0.00963	0.00987	8.95671	0.00057	2.03666	-0.03149	-0.00265	0.00290	0.00701
1110088-10 2X	H258.41579	0.00015	0.00851	0.00563	0.00994	9.17747	0.01988	2.07533	-0.02965	-0.00281	0.00274	-0.01780
1110088-11 2X	H255.23653	-0.00039	0.00752	0.00922	0.00667	9.07578	-0.00372	2.06673	-0.02552	-0.00265	0.00033	-0.01578
1110088-12 2X	H262.58994	0.00105	0.00958	0.01025	0.00925	9.22448	0.00075	2.20536	-0.02681	-0.00263	-0.00074	0.08201
1110088-13 5X	6.27666	-0.00225	0.00080	0.00569	-0.00165	2.91670	-0.00032	0.06709	-0.00659	-0.00200	0.00434	-0.01204
1110088-14 5X	6.61718	-0.00114	-0.00195	-0.00056	-0.00264	3.01904	-0.00032	0.06348	-0.00865	-0.00214	0.00256	-0.00907
1110088-15 2X	H251.50661	-0.00063	0.00929	0.01264	0.00761	9.11236	-0.00157	1.96736	-0.02795	-0.00263	0.00324	-0.01723
1110088-16 2X	H249.93871	-0.00105	0.00919	0.01330	0.00714	9.06363	0.00200	1.95577	-0.03287	-0.00281	0.00355	-0.03050
1110088-17 2X	H252.64842	0.00110	0.00894	0.01202	0.00740	9.13966	0.00075	1.96999	-0.03270	-0.00276	0.00520	-0.02155
CCV	5.25003	0.47701	1.00152	1.00740	0.99859	4.84222	1.04866	0.47939	0.34850	0.47981	0.51976	4.72428
CCB	0.00247	-0.00096	-0.00042	0.00138	-0.00132	-0.01598	-0.00157	-0.00246	-0.00037	-0.00130	0.00399	-0.01234
1110088-18 2X	H249.64927	0.00033	0.00857	0.01367	0.00601	9.01778	0.00111	1.99111	-0.02767	-0.00252	0.00290	0.01249
1110088-19 2X	H248.75714	0.00072	0.00948	0.01097	0.00874	8.98286	0.00040	1.99155	-0.02374	-0.00251	0.00298	0.00037
1110088-20 2X	H247.49055	0.00110	0.00853	0.00744	0.00907	8.95814	-0.00050	1.99887	-0.02979	-0.00276	0.00271	-0.00078
IP1110110-3MB	0.01412	-0.00225	-0.00062	-0.00473	0.00144	-0.02070	0.00165	-0.00286	-0.00025	-0.00189	0.00388	-0.01405
IP1110110-3RVS	1.00100	0.09535	0.04961	0.05182	0.04850	0.25997	0.10151	0.04438	-0.00229	0.04593	0.10727	0.47149
IP1110110-3LCS	-0.00336	0.46526	2.00160	2.03002	1.98741	1.90691	0.49654	0.46160	-0.02672	0.45650	1.99510	-0.02421
1110039-1	H84.68897	-0.00113	0.00922	0.01100	0.00832	11.00554	0.00164	0.95339	-0.04045	0.00152	0.00287	-0.01672
1110039-2	25.34402	-0.00192	0.00175	0.00462	0.00031	13.40828	0.00147	0.77514	-0.03139	-0.00192	0.00442	-0.01983
1110039-3	0.85078	-0.00125	0.00072	-0.00128	0.00172	7.83983	0.00021	0.04049	-0.00614	0.00511	-0.00038	-0.01965
1110039-3D	0.85370	-0.00080	-0.00054	0.00372	-0.00267	7.81395	0.00271	0.04049	-0.00593	0.00474	0.00309	-0.00175
CCV	5.15769	0.48177	0.99852	1.00695	0.99431	4.83024	1.04938	0.47871	0.34006	0.47756	0.52300	4.71911
CCB	-0.00045	-0.00062	0.00179	0.00008	0.00264	-0.01784	0.00039	-0.00262	-0.00182	-0.00157	0.00694	-0.01753

Sample Id1	S	Sb	Se	Se I	Se II	Si	Sn	Sr	Th	Ti	Tl	U
1110039-3L 5X	0.14525	-0.00303	-0.00149	-0.00031	-0.00208	1.50681	0.00075	0.00553	-0.00082	-0.00040	0.00316	-0.02158
1110039-3MS	0.87266	0.47451	2.01154	2.04329	1.99569	9.77306	0.51372	0.50922	-0.03046	0.46431	2.02959	-0.02260
1110039-3MSD	0.85953	0.46595	1.98990	2.03427	1.96775	9.64149	0.50352	0.50671	-0.03135	0.45756	2.00286	-0.03326
1110053-1	44.78027	-0.00464	0.00029	0.00232	-0.00073	4.08813	0.00165	0.37373	-0.01143	-0.00161	0.00528	-0.01901
1110053-2	46.17758	-0.00297	-0.00002	-0.00094	0.00044	4.19915	-0.00104	0.38103	-0.01423	-0.00176	0.00237	-0.03056
1110088-21 2X	H248.37814	0.00285	0.00843	0.00833	0.00848	8.98444	-0.00139	2.01335	-0.02854	-0.00265	-0.00099	-0.01146
1110088-22 2X	H245.76103	0.00127	0.00981	0.01253	0.00845	8.90049	0.00200	1.99118	-0.03013	-0.00262	0.00384	-0.01088
1110088-23 2X	H247.39725	0.00068	0.00938	0.01320	0.00747	8.95679	0.00272	2.00654	-0.02818	-0.00277	0.00042	-0.01867
1110088-24 2X	H254.61849	0.00140	0.00887	0.01007	0.00827	9.07685	0.00075	2.06575	-0.03772	-0.00290	0.00443	-0.00540
1110088-25 2X	H251.11951	0.00158	0.00921	0.01023	0.00870	8.95600	-0.00014	2.04851	-0.02852	-0.00276	-0.00058	-0.01607
CCV	5.22658	0.48269	0.99719	1.01023	0.99068	4.81638	1.05620	0.48234	0.34896	0.47504	0.52643	4.72980
CCB	0.00975	-0.00130	-0.00163	-0.00260	-0.00114	-0.01769	-0.00032	-0.00249	-0.00171	-0.00142	0.00417	-0.01349
1110088-26 2X	H250.51805	0.00081	0.00823	0.00917	0.00776	8.90782	0.00200	2.05719	-0.02400	-0.00272	-0.00058	-0.01434
1110088-27 5X	6.30014	-0.00342	-0.00193	-0.00491	-0.00045	2.91677	0.00111	0.00661	-0.00085	-0.00191	-0.00027	-0.02559
1110088-28 5X	6.40874	-0.00020	-0.00137	-0.00271	-0.00070	2.91024	0.00129	0.00642	-0.00129	-0.00182	0.00089	-0.01060
1109372-1 10X	22.10986	-0.00180	-0.00196	0.00081	-0.00334	0.78320	0.00004	0.27682	-0.00379	-0.00191	0.00046	-0.01556
1109372-1D 10X	21.84547	-0.00207	-0.00124	0.00209	-0.00290	0.76964	-0.00121	0.27234	-0.00443	-0.00189	0.00010	-0.01816
1109372-1L 50X	4.45156	-0.00192	-0.00091	0.00087	-0.00179	0.13897	-0.00086	0.05312	-0.00273	-0.00191	0.00407	-0.02128
1109372-1A 10X	44.23540	-0.00269	0.00060	0.00383	-0.00101	0.79285	-0.00372	0.27904	-0.00454	-0.00190	0.00101	-0.01470
1109301-1 10X	0.08114	-0.00103	-0.00120	-0.00453	0.00046	2.84276	-0.00441	0.06311	0.00859	0.12890	-0.00246	-0.00842
1109301-1D 10X	0.06803	-0.00190	0.00171	-0.00035	0.00274	3.51666	0.00091	0.08199	0.01482	0.16844	-0.00092	-0.01225
1109301-1L 50X	-0.00773	-0.00186	-0.00143	-0.00364	-0.00033	0.56747	-0.00160	0.01015	-0.00136	0.02481	-0.00054	-0.01351
CCV	5.13278	0.47996	0.98994	1.00859	0.98063	4.78740	1.05441	0.48163	0.34155	0.47183	0.52468	4.70847
CCB	-0.01939	-0.00234	-0.00055	-0.00491	0.00162	-0.02281	0.00165	-0.00289	0.00116	-0.00153	0.00010	-0.02560
1109301-1MS 10X	0.05637	0.03811	0.20449	0.20108	0.20620	4.09365	0.05356	0.12000	0.00986	0.23020	0.20456	-0.01425
1109301-1MSD 10X	0.03452	0.03628	0.18138	0.18082	0.18166	3.27623	0.04611	0.09601	0.00600	0.18755	0.18942	-0.00581
1109301-1A	0.83766	0.45379	1.77656	1.77371	1.77798	28.46257	0.50464	1.10393	0.04230	1.64549	1.94480	0.08385
1109363-1A	6.43956	0.44848	1.84811	1.86727	1.83854	7.56712	0.49948	2.98229	0.10684	0.69718	1.90159	0.95547
1109363-12 5X	1.49997	-0.00054	0.02130	0.01625	0.02382	1.55158	-0.00163	0.24141	0.03700	0.04632	0.00277	0.05572
1109362-1A	25.20160	0.44784	1.88811	1.90855	1.87790	14.77091	0.49613	0.84452	0.07158	0.65194	1.89893	4.33616
1110088-4	H481.33388	0.00336	0.02278	0.02383	0.02226	17.53101	0.00129	3.85643	-0.03353	-0.00305	0.00254	0.02489
1110088-5	H486.27040	0.00331	0.01963	0.02316	0.01786	17.78133	-0.00246	3.90772	-0.04052	-0.00329	0.00328	0.03499
1110088-18	H484.14177	0.00405	0.02121	0.02372	0.01997	17.68466	-0.00300	3.86347	-0.03447	-0.00328	0.00509	0.02692
1110088-19	H485.32799	0.00430	0.02088	0.02489	0.01888	17.70406	0.00040	3.86309	-0.04006	-0.00353	0.00240	0.02576
CCV	5.22364	0.47726	0.98542	1.00055	0.97787	4.78791	1.04742	0.47888	0.34724	0.47067	0.52401	4.68102
CCB	0.07094	-0.00141	-0.00041	-0.00041	-0.00041	-0.01722	-0.00122	-0.00204	-0.00152	-0.00165	0.00080	-0.00916
1110088-20	H481.08792	0.00290	0.01955	0.01946	0.01960	17.61362	-0.00032	3.89792	-0.03472	-0.00329	0.00063	0.02894
1110088-26	H495.53750	0.00384	0.02132	0.02380	0.02008	17.80275	-0.00050	4.04340	-0.03744	-0.00332	0.00348	-0.00396
1109301-1A 10X	0.43527	0.45903	1.85683	1.91197	1.82930	4.86932	0.50302	0.53192	0.01739	0.58298	1.93360	-0.01497
CRI	0.29243	0.12564	0.01405	0.01682	0.01267	0.09749	0.10708	0.01963	0.01383	0.01976	0.02370	0.18690
ICSA	0.05783	-0.00058	-0.00282	L-0.00758	-0.00044	-0.02510	0.00182	-0.00145	-0.02812	0.00015	0.00106	0.02668
ICSAB	1.08560	0.58140	0.04717	0.03655	0.05247	0.90688	1.04888	0.96014	0.08469	0.90477	0.10208	9.44301
CCV	5.11812	0.47845	0.97612	0.98889	0.96975	4.69972	1.03398	0.47470	0.33937	0.46057	0.51718	4.64326
CCB	-0.00919	-0.00041	-0.00190	-0.00059	-0.00256	-0.02310	0.00129	-0.00263	0.00162	-0.00150	0.00366	-0.01407

Sample Id1	V	Zn	Zr
MIXBHGH	4.94837	9.72399	L-0.07357
MIXAHIGH	-0.00964	-0.00242	0.00668
MIXCHIGH	L-0.01020	-0.00046	H5.01563
ICV	0.24756	0.51862	0.51061
ICB	-0.00005	0.00016	0.00203
CRI	0.10359	0.06527	0.05394
ICSA	-0.00574	-0.00042	0.00606
ICSAB	0.45857	0.92376	0.48147
CCV	0.48629	1.00404	1.00197
CCB	-0.00065	-0.00013	0.00144
F111006-1MB	-0.00049	0.00452	0.00106
F111006-1RVS	0.04772	0.04841	0.05071
F111006-1LCS	0.48438	0.50900	0.00392
1109351-1	-0.00040	0.00001	0.00011
1109351-2	-0.00047	-0.00086	0.00033
1109351-4	-0.00035	0.00394	0.00038
1109351-5	0.00007	0.00132	0.00084
1109381-1	-0.00017	0.01905	0.00094
1109381-1D	-0.00024	0.01745	0.00110
1109381-1L 5X	-0.00044	0.13099	0.00059
CCV	0.48481	0.99176	0.99726
CCB	-0.00024	0.00030	0.00174
1109381-1MS	0.47730	0.50011	0.00354
1109381-1MSD	0.48446	0.50754	0.00098
1109382-1	-0.00053	0.00306	-0.00017
1109382-2	0.00090	0.01629	0.00019
1109382-4	-0.00092	0.00059	0.00001
1109382-5	-0.00014	0.00597	0.00027
1110028-10	-0.00053	0.00321	0.00041
1110028-11	-0.00025	0.00248	0.00041
1110028-12	-0.00074	0.00263	-0.00024
1110028-13	-0.00133	0.01295	-0.00134
CCV	0.48214	0.97713	0.99607
CCB	-0.00052	0.00074	0.00152
1110028-14	-0.00035	0.00277	0.00163
1110028-15	-0.00046	0.03111	0.00075
1110035-9	-0.00037	0.00742	0.00016
1110035-10	-0.00058	0.00277	0.00132
1110035-11	0.00035	0.00466	0.00089
1110035-12	-0.00069	0.02196	0.00000
1P111007-2MB	-0.00046	0.01193	0.00048
ZZZ	0.00044	0.02748	0.00050
1P111007-2LCS	0.48169	0.50011	0.00131
1P111007-2LCSD	0.47854	0.49413	0.00021
ICV	0.48292	0.97392	0.99820
ICB	0.00000	0.00059	0.00166
1109372-1	0.00835	0.00176	0.00201
1109372-1D	0.00824	0.00379	0.00201
1109372-1L 5X	0.00143	0.00059	0.00093
1109372-1A	0.47163	0.45579	0.00321



Sample Id1	V	Zn	Zr
1109372-2	0.00707	0.00176	0.00126
1109372-3	0.01916	0.00161	0.00172
1109372-4	0.02340	0.00190	0.00206
1109372-5	0.01477	0.00248	0.00196
1109372-6	0.02268	0.00379	0.00179
1110028-1	-0.00028	0.00423	0.00028
CCV	0.48020	0.96134	0.99639
CCB	0.00018	0.00059	0.00169
1110028-2	-0.00027	0.01062	0.00166
1110028-4	-0.00048	0.00336	0.00136
1110028-5	-0.00051	0.00365	-0.00057
1110028-7	-0.00069	0.00190	-0.00005
1110028-8	-0.00011	0.02690	0.00071
1110035-1	0.00009	0.00452	-0.00036
1110035-4	-0.00050	0.00132	-0.00004
1110035-5	0.00070	0.00190	-0.00001
1110035-7	-0.00077	0.01687	-0.00029
IP111007-4MB	-0.00077	0.00190	0.00008
CCV	0.47896	0.95388	0.99370
CCB	-0.00031	-0.00013	0.00155
IP111007-4RVS	0.04808	0.04608	0.04983
IP111007-4LCS	0.47178	0.45011	0.00494
IP111007-4LCSD	0.46902	0.44894	0.00278
1109301-1	1.52618	0.26761	0.01027
1109301-1D	1.91184	0.31230	0.01257
1109301-1L 5X	0.31337	0.05727	0.00196
1109301-1MS	2.01150	0.70551	0.01305
1109301-1MSD	1.63449	0.61926	0.01082
ZZZ	L-0.44599	5.87835	L-0.12757
ZZZ	0.86132	0.45521	0.05580
CCV	0.47314	0.93648	0.97864
CCB	-0.00011	0.00030	0.00159
ZZZ	L-0.11571	1.40373	L-0.02917
ZZZ	1.51230	0.90242	0.04279
ZZZ	0.46797	0.92040	0.97135
ZZZ	0.00013	0.00132	0.00117
CCV	0.47809	0.98313	0.98084
CCB	0.00001	-0.00086	0.00177
1109363-1	0.88751	0.48844	0.06027
1109363-1D	0.92828	0.51585	0.05917
1109363-1L 5X	0.18488	0.10627	0.01246
1109363-1MS	1.53014	0.96236	0.04434
1109363-1MSD	1.52369	0.95461	0.04224
CCV	0.48200	1.00580	0.98909
CCB	-0.00039	-0.00100	0.00144
1109363-2	0.15602	0.23341	0.02661
1109363-3	0.09266	0.24854	0.02357
1109363-4	0.09988	0.28202	0.02704
1109363-5	0.08873	0.25480	0.02493
1109363-6	0.09579	0.26470	0.02222

Sample Id1	V	Zn	Zr
1109363-7	0.10323	0.27081	0.02795
1109363-8	0.12879	0.24185	0.02673
CCV	0.47939	0.99717	0.98676
CCB	-0.00057	0.00001	0.00159
1109363-9	0.09713	0.21711	0.02267
1109363-10	0.08818	0.25160	0.02397
1109363-11	0.08489	0.24243	0.01996
1109363-12	0.92655	0.59490	0.06359
IP111007-5MB	-0.00070	0.00016	0.00086
IP111007-5RVS	0.04791	0.04783	0.04835
IP111007-5LCS	0.46450	0.45842	0.00508
1109362-1	1.03662	0.21231	0.04168
1109362-1D	0.92182	0.20081	0.04698
1109362-1L 5X	0.21850	0.04739	0.00873
CCV	0.47318	0.97626	0.97186
CCB	-0.00026	-0.00100	0.00133
1109362-1MS	1.63292	0.66814	0.06051
1109362-1MSD	1.63343	0.65661	0.05979
1109362-2	0.94390	0.19077	0.04555
1109362-3	0.89622	0.14670	0.04562
1109362-4	0.44998	0.15862	0.02555
1109362-5	0.10774	0.16342	0.02139
1109362-6	0.17015	0.23937	0.03026
1109362-7	0.14722	0.21813	0.02784
1109362-8	0.10815	0.13942	0.01875
1109362-9	0.23289	0.20518	0.02364
CCV	0.47644	0.97728	0.98067
CCB	-0.00045	-0.00028	0.00105
1109362-10	0.45445	0.14190	0.02787
1109362-11	0.55977	0.20489	0.04001
1109362-12	0.21825	0.12241	0.01767
1109362-13	0.10160	0.27838	0.01847
1109362-14	0.12236	0.20983	0.02321
IP111007-3MB	-0.00053	0.00001	0.00045
IP111007-3RVS	0.04719	0.05001	0.04778
IP111007-3LCS	-0.00044	0.00292	0.00093
1110025-1 10X	0.00034	0.00059	0.00087
1110025-1D 10X	0.00034	0.00205	0.00063
CCV	0.47835	0.99015	0.98640
CCB	-0.00033	-0.00071	0.00119
1110025-1L 50X	0.00007	0.00074	0.00107
1110025-1MS 10X	0.00004	0.00466	0.00061
1110025-1MSD 10X	-0.00019	0.00074	0.00043
1110025-2 5X	0.00050	0.00321	0.00032
1110025-3 5X	0.00034	-0.00013	0.00004
1110025-4 5X	0.00059	0.00190	0.00008
1110025-5 5X	0.00043	0.00103	0.00027
1110025-6 5X	0.00062	0.00161	0.00036
1110025-7 5X	0.00099	0.00059	0.00042
1110025-8 5X	0.00069	-0.00042	0.00019

Sample Id1	V	Zn	Zr
CCV	0.48046	0.99176	0.99054
CCB	-0.00021	-0.00042	0.00143
1110025-9 5X	0.00095	0.00248	0.00075
1110025-10 5X	0.00055	0.00045	0.00045
1110025-11 5X	0.00034	0.00539	0.00001
1110025-12 5X	0.00035	0.00423	0.00015
1110025-13 5X	0.00046	0.00161	0.00023
1110025-14 5X	0.00046	0.00016	0.00120
IP111010-2MB	-0.00072	0.00786	0.00044
IP111010-2RVS	0.04718	0.04797	0.04810
IP111010-2LCS	-0.00030	0.00176	0.00258
1110088-1 2X	0.00032	0.00452	0.00147
CCV	0.47042	0.94993	0.97421
CCB	0.00000	-0.00071	0.00163
1110088-1D 2X	-0.00019	0.00539	0.00212
1110088-1L 10X	-0.00051	0.00045	0.00100
1110088-1MS 2X	-0.00002	0.00030	0.00123
1110088-1MSD 2X	0.00030	0.00016	0.00135
1110088-2 2X	0.00062	0.00219	0.00071
1110088-3 2X	-0.00034	0.00016	0.00047
1110088-4 2X	0.00007	-0.00013	0.00037
1110088-5 2X	0.00009	0.00016	0.00058
1110088-6 2X	-0.00002	0.00859	0.00046
1110088-7 2X	0.00049	-0.00130	0.00113
CCV	0.48054	1.00872	0.98719
CCB	-0.00061	-0.00057	0.00153
1110088-8 2X	-0.00010	-0.00071	0.00183
1110088-9 2X	0.00018	0.00423	0.00150
1110088-10 2X	-0.00030	-0.00013	0.00077
1110088-11 2X	-0.00028	0.00074	0.00036
1110088-12 2X	0.00043	0.01440	0.00102
1110088-13 5X	0.00113	-0.00086	0.00063
1110088-14 5X	0.00055	-0.00013	0.00049
1110088-15 2X	0.00041	0.00234	0.00042
1110088-16 2X	-0.00002	0.00030	0.00041
1110088-17 2X	0.00030	-0.00028	0.00079
CCV	0.47718	0.99161	0.98264
CCB	-0.00005	-0.00042	0.00167
1110088-18 2X	0.00058	-0.00028	0.00198
1110088-19 2X	-0.00048	-0.00071	0.00074
1110088-20 2X	-0.00018	0.00045	0.00072
IP1110110-3MB	-0.00046	0.00118	0.00043
IP1110110-3RVS	0.04842	0.04986	0.04861
IP1110110-3LCS	0.46288	0.47926	0.00508
1110039-1	0.00263	0.00161	0.00095
1110039-2	0.00680	0.00481	-0.00010
1110039-3	0.00090	0.00059	-0.00062
1110039-3D	0.00169	0.00074	0.00000
CCV	0.47547	0.99205	0.98061
CCB	-0.00045	-0.00057	0.00157

Sample Id1	V	Zn	Zr
1110039-3L 5X	-0.00056	-0.00100	0.00046
1110039-3MS	0.47033	0.48640	0.00392
1110039-3MSD	0.46267	0.46862	0.00174
1110053-1	0.00003	0.02850	0.00047
1110053-2	-0.00088	0.02573	0.00020
1110088-21 2X	0.00009	0.00089	0.00040
1110088-22 2X	0.00009	-0.00100	0.00046
1110088-23 2X	0.00026	-0.00144	0.00004
1110088-24 2X	0.00030	0.00830	0.00103
1110088-25 2X	0.00030	0.00016	0.00030
CCV	0.47717	0.99030	0.98278
CCB	-0.00019	-0.00071	0.00167
1110088-26 2X	-0.00012	0.00074	0.00110
1110088-27 5X	0.00025	-0.00013	-0.00002
1110088-28 5X	0.00002	-0.00028	0.00033
1109372-1 10X	0.00053	0.00190	0.00087
1109372-1D 10X	0.00016	0.00234	0.00071
1109372-1L 50X	-0.00049	0.00350	0.00049
1109372-1A 10X	0.00007	0.00103	0.00057
1109301-1 10X	0.15317	0.02966	0.00174
1109301-1D 10X	0.20098	0.03620	0.00158
1109301-1L 50X	0.03104	0.00583	0.00083
CCV	0.47405	0.97874	0.97931
CCB	-0.00093	-0.00042	0.00091
1109301-1MS 10X	0.21948	0.08228	0.00424
1109301-1MSD 10X	0.17155	0.07050	0.00264
1109301-1A	1.89268	0.72040	0.01282
1109363-1A	1.31452	0.90418	0.05542
1109363-12 5X	0.19974	0.13215	0.01313
1109362-1A	1.47443	0.65939	0.04111
1110088-4	0.00094	0.00016	-0.00096
1110088-5	0.00108	-0.00086	-0.00057
1110088-18	0.00106	0.00074	-0.00112
1110088-19	0.00113	0.00016	-0.00072
CCV	0.47335	0.97933	0.97740
CCB	-0.00042	-0.00042	0.00150
1110088-20	0.00030	0.00059	0.00084
1110088-26	0.00120	0.00379	-0.00022
1109301-1A 10X	0.62197	0.62903	0.00264
CRI	0.10377	0.05975	0.05066
ICSA	-0.00488	-0.00188	0.00531
ICSAB	0.45905	0.90768	0.48171
CCV	0.46884	0.95915	0.96854
CCB	0.00020	-0.00130	0.00135

Method : Paragon File : 111010A  
 SampleId1 : BLANK SampleId2 :  
 Analysis commenced : 10/10/2011 11:18:49  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:36:26  
 [STD]  
 Position : TUBE1

Raw intensities

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.074	0.144	0.177	0.051	0.014	0.376	0.112	0.040	0.080
#2	0.073	0.150	0.176	0.050	0.014	0.379	0.114	0.048	0.081
<b>Mean</b>	<b>0.073</b>	<b>0.147</b>	<b>0.177</b>	<b>0.050</b>	<b>0.014</b>	<b>0.377</b>	<b>0.113</b>	<b>0.044</b>	<b>0.080</b>
%RSD	1.252	2.690	0.360	1.127	0.500	0.562	1.441	13.089	0.968
	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.077	0.136	0.056	0.040	0.518	0.076	0.077	0.009	0.061
#2	0.077	0.135	0.056	0.048	0.511	0.077	0.083	0.009	0.060
<b>Mean</b>	<b>0.077</b>	<b>0.135</b>	<b>0.056</b>	<b>0.044</b>	<b>0.515</b>	<b>0.077</b>	<b>0.080</b>	<b>0.009</b>	<b>0.060</b>
%RSD	0.092	0.628	0.000	13.062	0.948	0.737	4.950	0.790	0.117
	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.097	0.156	0.068	1.715	0.501	0.010	0.150	0.344	0.226
#2	0.103	0.154	0.070	1.696	0.497	0.010	0.150	0.345	0.229
<b>Mean</b>	<b>0.100</b>	<b>0.155</b>	<b>0.069</b>	<b>1.705</b>	<b>0.499</b>	<b>0.010</b>	<b>0.150</b>	<b>0.344</b>	<b>0.227</b>
%RSD	3.960	1.095	2.062	0.750	0.538	0.697	0.142	0.370	1.027
	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.253	0.066	0.023	0.397	0.144	0.215	0.104	0.092	0.017
#2	0.249	0.067	0.024	0.393	0.142	0.217	0.101	0.091	0.017
<b>Mean</b>	<b>0.251</b>	<b>0.066</b>	<b>0.024</b>	<b>0.395</b>	<b>0.143</b>	<b>0.216</b>	<b>0.103</b>	<b>0.092</b>	<b>0.017</b>
%RSD	1.155	0.534	2.093	0.644	0.839	0.950	1.518	0.616	1.644
	Zr	Pb	Se						
	Reading	Reading	Reading						
#1	0.175								
#2	0.174								
<b>Mean</b>	<b>0.175</b>	<b>0.000</b>	<b>0.000</b>						
%RSD	0.283	0.000	0.000						

Method : Paragon File : 111010A  
 SampleId1 : RL SampleId2 :  
 Analysis commenced : 10/10/2011 11:21:14  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:36:26  
 [STD]  
 Position : TUBE2

Raw intensities



	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.078	0.176	0.185	0.145	0.022	0.462	0.117	0.131	0.090
#2	0.078	0.177	0.182	0.144	0.022	0.464	0.115	0.132	0.087
<b>Mean</b>	<b>0.078</b>	<b>0.176</b>	<b>0.183</b>	<b>0.145</b>	<b>0.022</b>	<b>0.463</b>	<b>0.116</b>	<b>0.132</b>	<b>0.089</b>
%RSD	0.273	0.601	1.197	0.489	0.321	0.275	0.853	0.376	1.994

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.080	0.144	0.058	0.092	0.817	0.466	0.140	0.012	0.078
#2	0.080	0.145	0.059	0.092	0.817	0.467	0.140	0.012	0.077
<b>Mean</b>	<b>0.080</b>	<b>0.144</b>	<b>0.059</b>	<b>0.092</b>	<b>0.817</b>	<b>0.467</b>	<b>0.140</b>	<b>0.012</b>	<b>0.077</b>
%RSD	0.441	0.491	0.242	0.000	0.052	0.136	0.101	0.000	0.823

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	1.463	0.179	0.096	1.719	0.515	0.012	0.158	0.344	0.238
#2	1.467	0.179	0.094	1.714	0.516	0.012	0.157	0.344	0.236
<b>Mean</b>	<b>1.465</b>	<b>0.179</b>	<b>0.095</b>	<b>1.716</b>	<b>0.516</b>	<b>0.012</b>	<b>0.157</b>	<b>0.344</b>	<b>0.237</b>
%RSD	0.212	0.237	1.636	0.227	0.110	2.959	0.180	0.041	0.716

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.311	0.069	0.198	0.414	0.289	0.221	0.123	0.099	0.019
#2	0.313	0.069	0.199	0.411	0.287	0.220	0.123	0.098	0.020
<b>Mean</b>	<b>0.312</b>	<b>0.069</b>	<b>0.198</b>	<b>0.412</b>	<b>0.288</b>	<b>0.221</b>	<b>0.123</b>	<b>0.098</b>	<b>0.020</b>
%RSD	0.340	0.718	0.250	0.583	0.515	0.385	0.230	0.646	0.725

	Zr	Pb	Se
	Reading	Reading	Reading
#1	0.227		
#2	0.225		
<b>Mean</b>	<b>0.226</b>	<b>0.000</b>	<b>0.000</b>
%RSD	0.531	0.000	0.000

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:36:26

SampleId1 : RL2

SampleId2 :

[STD]

Analysis commenced : 10/10/2011 11:23:16

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE3

Raw intensities

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.092	0.239	0.196	0.330	0.037	0.641	0.129	0.323	0.110
#2	0.092	0.239	0.194	0.328	0.037	0.642	0.130	0.324	0.108
<b>Mean</b>	<b>0.092</b>	<b>0.239</b>	<b>0.195</b>	<b>0.329</b>	<b>0.037</b>	<b>0.641</b>	<b>0.130</b>	<b>0.324</b>	<b>0.109</b>
%RSD	0.077	0.148	0.762	0.365	0.379	0.033	0.655	0.131	1.425

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
--	----	----	----	----	---	----	----	----	----

	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.090	0.170	0.066	0.202	1.380	1.206	0.268	0.018	0.114
#2	0.091	0.170	0.066	0.203	1.381	1.210	0.269	0.018	0.114
Mean	0.090	0.170	0.066	0.202	1.381	1.208	0.268	0.018	0.114
%RSD	0.392	0.083	0.535	0.385	0.067	0.199	0.237	0.385	0.186

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	3.903	0.230	0.143	1.807	0.550	0.016	0.180	0.364	0.255
#2	3.918	0.231	0.143	1.820	0.545	0.016	0.180	0.360	0.260
Mean	3.910	0.231	0.143	1.813	0.548	0.016	0.180	0.362	0.257
%RSD	0.288	0.276	0.198	0.511	0.671	1.779	0.039	0.802	1.402

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.427	0.077	0.470	0.467	0.569	0.238	0.169	0.116	0.024
#2	0.429	0.077	0.472	0.469	0.573	0.240	0.169	0.116	0.025
Mean	0.428	0.077	0.471	0.468	0.571	0.239	0.169	0.116	0.025
%RSD	0.314	0.643	0.255	0.257	0.458	0.503	0.335	0.366	0.577

	Zr	Pb	Se
	Reading	Reading	Reading
#1	0.343		
#2	0.343		
Mean	0.343	0.000	0.000
%RSD	0.103	0.000	0.000

Method : Paragon File : 111010A  
SampleId1 : B3 SampleId2 :  
Analysis commenced : 10/10/2011 11:25:09  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:36:27  
[STD]

Position : TUBE4

Raw intensities

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.118	0.146	0.235	0.221	0.346	1.079	0.113	0.035	0.437
#2	0.118	0.146	0.240	0.219	0.345	1.078	0.114	0.035	0.434
Mean	0.118	0.146	0.238	0.220	0.345	1.079	0.114	0.035	0.435
%RSD	0.000	0.097	1.548	0.644	0.143	0.059	0.623	0.203	0.471

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.164	0.521	0.189	0.035	0.519	0.076	0.076	0.141	0.226
#2	0.164	0.520	0.190	0.034	0.515	0.076	0.076	0.140	0.224
Mean	0.164	0.520	0.190	0.034	0.517	0.076	0.076	0.140	0.225
%RSD	0.259	0.068	0.075	0.205	0.492	0.093	0.186	0.201	0.535

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading

#1	0.090	0.576	0.292	2.253	0.805	0.010	0.173	0.394	0.303
#2	0.090	0.570	0.293	2.257	0.811	0.010	0.172	0.390	0.300
<b>Mean</b>	<b>0.090</b>	<b>0.573</b>	<b>0.292</b>	<b>2.255</b>	<b>0.808</b>	<b>0.010</b>	<b>0.172</b>	<b>0.392</b>	<b>0.302</b>
%RSD	0.236	0.691	0.290	0.125	0.569	2.154	0.493	0.631	0.727

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.740	0.096	1.247	0.422	1.421	0.280	0.103	0.242	0.057
#2	0.740	0.096	1.244	0.422	1.419	0.280	0.103	0.242	0.057
<b>Mean</b>	<b>0.740</b>	<b>0.096</b>	<b>1.246</b>	<b>0.422</b>	<b>1.420</b>	<b>0.280</b>	<b>0.103</b>	<b>0.242</b>	<b>0.057</b>
%RSD	0.038	0.368	0.159	0.050	0.110	0.126	0.275	0.117	0.124

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	Reading	Reading	Reading
#1	0.209		
#2	0.203		
<b>Mean</b>	<b>0.206</b>	<b>0.000</b>	<b>0.000</b>
%RSD	2.097	0.000	0.000

Method : Paragon File : 111010A  
 SampleId1 : B2 SampleId2 :  
 Analysis commenced : 10/10/2011 11:27:04  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:36:27  
 [STD]  
 Position : TUBE5

# Raw intensities

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.514	0.155	0.759	1.721	3.234	7.317	0.118	0.034	3.555
#2	0.512	0.157	0.756	1.717	3.235	7.332	0.119	0.039	3.556
<b>Mean</b>	<b>0.513</b>	<b>0.156</b>	<b>0.758</b>	<b>1.719</b>	<b>3.235</b>	<b>7.324</b>	<b>0.118</b>	<b>0.037</b>	<b>3.555</b>
%RSD	0.193	1.224	0.299	0.177	0.022	0.144	0.895	9.248	0.020

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.922	3.905	1.369	0.038	0.517	0.077	0.077	1.302	1.660
#2	0.926	3.916	1.363	0.044	0.523	0.079	0.081	1.306	1.668
<b>Mean</b>	<b>0.924</b>	<b>3.910</b>	<b>1.366</b>	<b>0.041</b>	<b>0.520</b>	<b>0.078</b>	<b>0.079</b>	<b>1.304</b>	<b>1.664</b>
%RSD	0.268	0.190	0.280	9.520	0.721	1.730	3.475	0.255	0.323

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.103	4.228	2.239	7.057	3.475	0.010	0.371	0.799	0.940
#2	0.108	4.238	2.249	7.093	3.483	0.010	0.372	0.804	0.942
<b>Mean</b>	<b>0.105</b>	<b>4.233</b>	<b>2.244</b>	<b>7.075</b>	<b>3.479</b>	<b>0.010</b>	<b>0.371</b>	<b>0.801</b>	<b>0.941</b>
%RSD	3.020	0.160	0.318	0.355	0.144	0.697	0.248	0.379	0.150

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	5.005	0.357	11.999	0.647	12.655	0.817	0.106	1.555	0.409

#2	5.016	0.357	11.983	0.654	12.656	0.836	0.107	1.555	0.411
<b>Mean</b>	<b>5.011</b>	<b>0.357</b>	<b>11.991</b>	<b>0.650</b>	<b>12.655</b>	<b>0.827</b>	<b>0.107</b>	<b>1.555</b>	<b>0.410</b>
%RSD	0.144	0.119	0.094	0.740	0.006	1.642	0.795	0.032	0.483

	<b>Zr</b> Reading	<b>Pb</b> Reading	<b>Se</b> Reading
#1	0.276		
#2	0.269		
<b>Mean</b>	<b>0.272</b>	<b>0.000</b>	<b>0.000</b>
%RSD	1.895	0.000	0.000

Method : Paragon File : 111010A  
**SampleId1 : B1** **SampleId2 :**  
**Analysis commenced : 10/10/2011 11:30:15**  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:36:28  
**[STD]**

Position : TUBE6

# Raw intensities

	<b>Ag</b> Reading	<b>Al</b> Reading	<b>As</b> Reading	<b>B</b> Reading	<b>Ba</b> Reading	<b>Be</b> Reading	<b>Bi</b> Reading	<b>Ca</b> Reading	<b>Cd</b> Reading
#1	4.389	0.242	5.826	16.385	30.363	68.378	0.178	0.047	33.162
#2	4.392	0.241	5.838	16.411	30.405	68.385	0.180	0.047	33.160
<b>Mean</b>	<b>4.390</b>	<b>0.242</b>	<b>5.832</b>	<b>16.398</b>	<b>30.384</b>	<b>68.382</b>	<b>0.179</b>	<b>0.047</b>	<b>33.161</b>
%RSD	0.039	0.293	0.145	0.112	0.096	0.007	0.789	0.452	0.004

	<b>Co</b> Reading	<b>Cr</b> Reading	<b>Cu</b> Reading	<b>Fe</b> Reading	<b>K</b> Reading	<b>Li</b> Reading	<b>Mg</b> Reading	<b>Mn</b> Reading	<b>Mo</b> Reading
#1	8.408	37.130	13.004	0.063	0.536	0.089	0.093	12.173	15.613
#2	8.403	37.183	13.015	0.063	0.534	0.088	0.093	12.185	15.620
<b>Mean</b>	<b>8.406</b>	<b>37.156</b>	<b>13.009</b>	<b>0.063</b>	<b>0.535</b>	<b>0.089</b>	<b>0.093</b>	<b>12.179</b>	<b>15.617</b>
%RSD	0.044	0.100	0.058	0.449	0.264	0.638	0.381	0.066	0.035

	<b>Na</b> Reading	<b>Ni</b> Reading	<b>P</b> Reading	<b>Pb I</b> Reading	<b>Pb II</b> Reading	<b>S</b> Reading	<b>Sb</b> Reading	<b>Se I</b> Reading	<b>Se II</b> Reading
#1	0.167	40.156	19.581	54.516	29.686	0.013	2.330	4.822	7.158
#2	0.168	40.097	19.523	54.554	29.658	0.013	2.330	4.850	7.157
<b>Mean</b>	<b>0.168</b>	<b>40.127</b>	<b>19.552</b>	<b>54.535</b>	<b>29.672</b>	<b>0.013</b>	<b>2.330</b>	<b>4.836</b>	<b>7.157</b>
%RSD	0.211	0.103	0.210	0.049	0.068	0.000	0.003	0.409	0.013

	<b>Si</b> Reading	<b>Sn</b> Reading	<b>Sr</b> Reading	<b>Th</b> Reading	<b>Ti</b> Reading	<b>Tl</b> Reading	<b>U</b> Reading	<b>V</b> Reading	<b>Zn</b> Reading
#1	45.987	2.916	107.314	2.897	123.153	6.285	0.127	14.476	3.830
#2	46.209	2.924	107.348	2.909	123.294	6.310	0.128	14.480	3.832
<b>Mean</b>	<b>46.098</b>	<b>2.920</b>	<b>107.331</b>	<b>2.903</b>	<b>123.223</b>	<b>6.297</b>	<b>0.128</b>	<b>14.478</b>	<b>3.831</b>
%RSD	0.339	0.184	0.022	0.287	0.081	0.277	0.499	0.018	0.042

	<b>Zr</b> Reading	<b>Pb</b> Reading	<b>Se</b> Reading
#1	0.830		
#2	0.828		

Mean 0.829 0.000 0.000UNDGREEN  
%RSD 0.179 0.000 0.000

Method : Paragon File : 111010A  
SampleId1 : A5 SampleId2 :  
Analysis commenced : 10/10/2011 11:32:09  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:36:28  
[STD]  
Position : TUBE7

Raw intensities

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.075	1.398	0.180	0.069	0.019	0.389	0.113	2.045	0.086
#2	0.076	1.394	0.182	0.066	0.019	0.390	0.113	2.044	0.087
Mean	0.076	1.396	0.181	0.067	0.019	0.389	0.113	2.044	0.087
%RSD	0.187	0.208	0.741	4.089	0.367	0.127	0.187	0.035	0.571

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.078	0.145	0.058	1.971	1.755	3.373	1.385	0.011	0.076
#2	0.078	0.146	0.058	1.964	1.751	3.360	1.381	0.011	0.074
Mean	0.078	0.145	0.058	1.968	1.753	3.367	1.383	0.011	0.075
%RSD	0.272	0.488	0.367	0.252	0.161	0.265	0.240	0.000	2.362

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	3.486	0.163	0.074	1.742	0.522	0.010	0.156	0.351	0.238
#2	3.477	0.163	0.074	1.750	0.523	0.010	0.155	0.348	0.236
Mean	3.482	0.163	0.074	1.746	0.523	0.010	0.155	0.349	0.237
%RSD	0.171	0.347	0.381	0.312	0.230	0.740	0.364	0.546	0.566

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.278	0.069	0.075	0.458	0.196	0.221	0.110	0.098	0.019
#2	0.273	0.067	0.075	0.461	0.192	0.216	0.110	0.098	0.019
Mean	0.275	0.068	0.075	0.459	0.194	0.218	0.110	0.098	0.019
%RSD	1.285	1.145	0.000	0.431	1.604	1.813	0.000	0.217	1.131

	Zr	Pb	Se
	Reading	Reading	Reading
#1	0.178		
#2	0.178		
Mean	0.178	0.000	0.000
%RSD	0.318	0.000	0.000

Method : Paragon File : 111010A  
SampleId1 : A4 SampleId2 :  
Analysis commenced : 10/10/2011 11:34:07  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:36:28  
[STD]  
Position : TUBE8

Raw intensities1 11:36:33 User: MIKE LUNDGREEN

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.081	21.936	0.225	0.071	0.020	0.405	0.119	34.451	0.094
#2	0.080	21.937	0.223	0.070	0.022	0.410	0.117	34.371	0.095
<b>Mean</b>	<b>0.080</b>	<b>21.937</b>	<b>0.224</b>	<b>0.071</b>	<b>0.021</b>	<b>0.407</b>	<b>0.118</b>	<b>34.411</b>	<b>0.095</b>
%RSD	1.231	0.003	0.727	0.500	8.478	0.851	1.022	0.163	0.822

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.083	0.174	0.059	31.828	19.878	62.680	22.741	0.014	0.091
#2	0.084	0.177	0.060	31.757	19.829	62.582	22.721	0.015	0.092
<b>Mean</b>	<b>0.083</b>	<b>0.175</b>	<b>0.060</b>	<b>31.792</b>	<b>19.853</b>	<b>62.631</b>	<b>22.731</b>	<b>0.015</b>	<b>0.092</b>
%RSD	0.425	1.252	1.182	0.157	0.172	0.111	0.062	4.810	0.924

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	52.828	0.172	0.081	2.221	0.665	0.011	0.229	0.465	0.313
#2	52.809	0.173	0.086	2.221	0.658	0.010	0.229	0.467	0.317
<b>Mean</b>	<b>52.818</b>	<b>0.173</b>	<b>0.084</b>	<b>2.221</b>	<b>0.661</b>	<b>0.010</b>	<b>0.229</b>	<b>0.466</b>	<b>0.315</b>
%RSD	0.026	0.246	3.891	0.013	0.695	1.347	0.154	0.228	0.921

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.308	0.083	0.068	0.919	0.209	0.281	0.163	0.124	0.027
#2	0.310	0.084	0.077	0.913	0.217	0.277	0.164	0.125	0.027
<b>Mean</b>	<b>0.309</b>	<b>0.083</b>	<b>0.072</b>	<b>0.916</b>	<b>0.213</b>	<b>0.279</b>	<b>0.164</b>	<b>0.125</b>	<b>0.027</b>
%RSD	0.458	0.424	8.607	0.425	2.787	0.887	0.476	0.680	0.528

	Zr	Pb	Se
	Reading	Reading	Reading
#1	0.201		
#2	0.200		
<b>Mean</b>	<b>0.200</b>	<b>0.000</b>	<b>0.000</b>
%RSD	0.176	0.000	0.000

Method : Paragon File : 111010A  
SampleId1 : A3 SampleId2 :  
Analysis commenced : 10/10/2011 11:36:08  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:36:29  
[STD]

Position : TUBE9

Raw intensities

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.080	24.090	0.227	0.069	0.019	0.407	0.118	37.616	0.093
#2	0.081	24.143	0.227	0.067	0.017	0.400	0.117	37.670	0.091
<b>Mean</b>	<b>0.081</b>	<b>24.117</b>	<b>0.227</b>	<b>0.068</b>	<b>0.018</b>	<b>0.403</b>	<b>0.117</b>	<b>37.643</b>	<b>0.092</b>
%RSD	0.526	0.156	0.062	1.864	7.686	1.140	0.783	0.100	0.922

ted: 10/11/2011 11:36:33 User: MIKE LUNDGREEN

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.084	0.175	0.060	34.707	21.873	69.592	24.965	0.014	0.094
#2	0.083	0.173	0.058	34.777	21.942	69.812	25.035	0.014	0.091
<b>Mean</b>	<b>0.083</b>	<b>0.174</b>	<b>0.059</b>	<b>34.742</b>	<b>21.907</b>	<b>69.702</b>	<b>25.000</b>	<b>0.014</b>	<b>0.092</b>
%RSD	0.509	0.894	1.681	0.142	0.222	0.223	0.199	3.523	1.759

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	57.763	0.174	0.082	2.265	0.678	0.011	0.237	0.476	0.322
#2	57.869	0.172	0.083	2.273	0.678	0.011	0.239	0.473	0.321
<b>Mean</b>	<b>57.816</b>	<b>0.173</b>	<b>0.082</b>	<b>2.269</b>	<b>0.678</b>	<b>0.011</b>	<b>0.238</b>	<b>0.474</b>	<b>0.321</b>
%RSD	0.129	0.857	1.200	0.227	0.000	0.000	0.594	0.388	0.242

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.309	0.084	0.070	0.938	0.207	0.282	0.168	0.126	0.028
#2	0.305	0.084	0.063	0.935	0.199	0.286	0.168	0.125	0.028
<b>Mean</b>	<b>0.307</b>	<b>0.084</b>	<b>0.066</b>	<b>0.936</b>	<b>0.203</b>	<b>0.284</b>	<b>0.168</b>	<b>0.125</b>	<b>0.028</b>
%RSD	1.014	0.337	7.702	0.211	2.929	0.847	0.084	0.847	0.000

	Zr	Pb	Se
	Reading	Reading	Reading
#1	0.201		
#2	0.201		
<b>Mean</b>	<b>0.201</b>	<b>0.000</b>	<b>0.000</b>
%RSD	0.246	0.000	0.000

Method : Paragon File : 111010A  
SampleId1 : A2 SampleId2 :  
Analysis commenced : 10/10/2011 11:38:09  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:36:29

[STD]

Position : TUBE10

Raw intensities

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.084	46.666	0.279	0.079	0.017	0.416	0.123	71.237	0.099
#2	0.084	46.539	0.277	0.079	0.018	0.416	0.124	71.304	0.098
<b>Mean</b>	<b>0.084</b>	<b>46.602</b>	<b>0.278</b>	<b>0.079</b>	<b>0.018</b>	<b>0.416</b>	<b>0.123</b>	<b>71.270</b>	<b>0.099</b>
%RSD	0.253	0.193	0.458	0.627	2.397	0.017	0.517	0.066	0.359

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.089	0.190	0.060	63.317	42.816	146.039	48.328	0.017	0.120
#2	0.090	0.190	0.060	63.293	42.654	145.311	48.247	0.017	0.120
<b>Mean</b>	<b>0.090</b>	<b>0.190</b>	<b>0.060</b>	<b>63.305</b>	<b>42.735</b>	<b>145.675</b>	<b>48.287</b>	<b>0.017</b>	<b>0.120</b>
%RSD	0.631	0.075	0.119	0.027	0.268	0.353	0.119	0.000	0.118

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	106.263	0.181	0.093	2.812	0.847	0.012	0.321	0.601	0.416
#2	105.972	0.183	0.091	2.806	0.848	0.012	0.320	0.607	0.420
Mean	106.117	0.182	0.092	2.809	0.847	0.012	0.321	0.604	0.418
%RSD	0.193	0.698	1.151	0.171	0.050	2.338	0.331	0.679	0.659

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.327	0.104	0.087	1.140	0.215	0.347	0.207	0.144	0.037
#2	0.327	0.103	0.087	1.142	0.217	0.353	0.209	0.145	0.037
Mean	0.327	0.103	0.087	1.141	0.216	0.350	0.208	0.145	0.037
%RSD	0.065	0.616	0.324	0.155	0.686	1.212	0.544	0.635	0.952

	Zr	Pb	Se
	Reading	Reading	Reading
#1	0.215		
#2	0.216		
Mean	0.215	0.000	0.000
%RSD	0.329	0.000	0.000

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:36:29

SampleId1 : A1

SampleId2 :

[STD]

Analysis commenced : 10/10/2011 11:40:13

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE11

Raw intensities

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.091	106.343	0.416	0.114	0.020	0.460	0.138	156.193	0.123
#2	0.090	106.340	0.421	0.113	0.020	0.461	0.138	155.887	0.123
Mean	0.090	106.341	0.418	0.114	0.020	0.460	0.138	156.040	0.123
%RSD	0.785	0.002	0.862	0.809	0.358	0.200	0.461	0.139	0.460

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.107	0.229	0.063	127.282	95.770	365.414	112.014	0.027	0.207
#2	0.108	0.230	0.064	127.186	95.746	365.228	112.016	0.027	0.207
Mean	0.108	0.229	0.064	127.234	95.757	365.321	112.015	0.027	0.207
%RSD	0.263	0.493	0.334	0.053	0.018	0.036	0.001	0.260	0.068

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	206.110	0.210	0.118	4.424	1.340	0.015	0.579	0.989	0.686
#2	205.282	0.207	0.120	4.434	1.346	0.016	0.580	0.993	0.680
Mean	205.696	0.208	0.119	4.429	1.343	0.016	0.580	0.991	0.683
%RSD	0.285	1.256	1.250	0.169	0.311	0.912	0.037	0.293	0.600

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
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	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.376	0.156	0.159	1.528	0.264	0.548	0.316	0.196	0.066
#2	0.375	0.157	0.162	1.530	0.266	0.551	0.316	0.196	0.066
Mean	0.375	0.157	0.160	1.529	0.265	0.549	0.316	0.196	0.066
%RSD	0.075	0.226	0.970	0.097	0.507	0.322	0.134	0.000	0.000

	Zr Reading	Pb Reading	Se Reading
#1	0.250		
#2	0.250		
Mean	0.250	0.000	0.000
%RSD	0.085	0.000	0.000

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:36:30

SampleId1 : C3

SampleId2 :

[STD]

Analysis commenced : 10/10/2011 11:42:12

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE12

Raw intensities

	Ag Reading	Al Reading	As Reading	B Reading	Ba Reading	Be Reading	Bi Reading	Ca Reading	Cd Reading
#1	0.077	0.157	0.177	0.051	0.014	0.382	0.151	0.050	0.081
#2	0.075	0.156	0.175	0.052	0.014	0.380	0.150	0.047	0.081
Mean	0.076	0.157	0.176	0.051	0.014	0.381	0.150	0.049	0.081
%RSD	1.579	0.633	1.005	0.687	1.017	0.241	0.235	3.924	0.175

	Co Reading	Cr Reading	Cu Reading	Fe Reading	K Reading	Li Reading	Mg Reading	Mn Reading	Mo Reading
#1	0.077	0.142	0.056	0.056	0.522	0.095	0.091	0.009	0.059
#2	0.076	0.139	0.056	0.053	0.517	0.092	0.090	0.009	0.060
Mean	0.077	0.141	0.056	0.054	0.520	0.093	0.090	0.009	0.060
%RSD	0.922	1.208	0.000	3.247	0.612	2.050	1.485	0.000	0.475

	Na Reading	Ni Reading	P Reading	Pb I Reading	Pb II Reading	S Reading	Sb Reading	Se I Reading	Se II Reading
#1	0.142	0.162	0.071	1.705	0.502	0.027	0.147	0.347	0.225
#2	0.137	0.158	0.068	1.694	0.507	0.027	0.150	0.346	0.227
Mean	0.139	0.160	0.070	1.699	0.505	0.027	0.148	0.346	0.226
%RSD	2.992	1.947	3.449	0.470	0.672	1.302	1.288	0.184	0.689

	Si Reading	Sn Reading	Sr Reading	Th Reading	Ti Reading	Tl Reading	U Reading	V Reading	Zn Reading
#1	0.252	0.066	0.023	0.458	0.148	0.217	0.196	0.094	0.017
#2	0.252	0.066	0.023	0.456	0.147	0.213	0.196	0.093	0.017
Mean	0.252	0.066	0.023	0.457	0.148	0.215	0.196	0.093	0.017
%RSD	0.112	0.107	0.308	0.309	0.526	1.414	0.072	0.531	0.000

	Zr Reading	Pb Reading	Se Reading
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#1	0.550	UNDGREEN	
#2	0.562		
Mean	0.556	0.000	0.000
%RSD	1.539	0.000	0.000

Method : Paragon File : 111010A  
SampleId1 : C2 SampleId2 :  
Analysis commenced : 10/10/2011 11:44:11  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:36:30  
[STD]

Position : TUBE13

Raw intensities

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.102	0.167	0.183	0.057	0.014	0.415	0.484	0.047	0.083
#2	0.101	0.167	0.183	0.057	0.014	0.415	0.482	0.046	0.083
Mean	0.102	0.167	0.183	0.057	0.014	0.415	0.483	0.047	0.083
%RSD	0.348	0.254	0.232	0.000	0.000	0.000	0.366	1.361	0.426

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.080	0.193	0.064	0.047	0.522	0.084	0.126	0.011	0.060
#2	0.080	0.193	0.064	0.046	0.519	0.083	0.125	0.011	0.061
Mean	0.080	0.193	0.064	0.047	0.521	0.083	0.125	0.011	0.060
%RSD	0.177	0.110	0.221	2.279	0.380	1.106	0.395	0.000	1.287

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.123	0.163	0.071	1.781	0.531	0.183	0.151	0.349	0.232
#2	0.122	0.164	0.072	1.771	0.533	0.185	0.152	0.348	0.232
Mean	0.122	0.164	0.071	1.776	0.532	0.184	0.151	0.348	0.232
%RSD	0.752	0.605	0.694	0.378	0.306	0.576	0.327	0.183	0.091

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.291	0.067	0.026	0.997	0.181	0.221	1.016	0.111	0.017
#2	0.288	0.068	0.026	1.001	0.181	0.217	1.021	0.110	0.017
Mean	0.289	0.068	0.026	0.999	0.181	0.219	1.018	0.110	0.017
%RSD	0.562	0.419	0.271	0.255	0.078	1.294	0.326	0.706	0.408

	Zr	Pb	Se
	Reading	Reading	Reading
#1	4.636		
#2	4.694		
Mean	4.665	0.000	0.000
%RSD	0.879	0.000	0.000

Method : Paragon File : 111010A  
SampleId1 : C1 SampleId2 :  
Analysis commenced : 10/10/2011 11:46:07

Printed : 10/11/2011 11:36:30  
[STD]

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : TUBE14

Raw intensities

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.351	0.340	0.198	0.116	0.017	0.742	3.769	0.119	0.104
#2	0.350	0.339	0.197	0.118	0.017	0.742	3.757	0.120	0.105
<b>Mean</b>	<b>0.351</b>	<b>0.339</b>	<b>0.197</b>	<b>0.117</b>	<b>0.017</b>	<b>0.742</b>	<b>3.763</b>	<b>0.119</b>	<b>0.105</b>
%RSD	0.182	0.375	0.395	1.206	0.000	0.057	0.231	0.296	0.946
	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.110	0.699	0.147	0.105	0.532	0.090	0.538	0.027	0.066
#2	0.111	0.700	0.147	0.104	0.532	0.090	0.539	0.027	0.067
<b>Mean</b>	<b>0.110</b>	<b>0.700</b>	<b>0.147</b>	<b>0.105</b>	<b>0.532</b>	<b>0.090</b>	<b>0.539</b>	<b>0.027</b>	<b>0.067</b>
%RSD	0.577	0.101	0.048	0.135	0.040	0.157	0.079	0.530	0.953
	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.150	0.222	0.085	2.479	0.794	1.709	0.172	0.394	0.255
#2	0.151	0.224	0.085	2.485	0.791	1.709	0.174	0.392	0.255
<b>Mean</b>	<b>0.151</b>	<b>0.223</b>	<b>0.085</b>	<b>2.482</b>	<b>0.793</b>	<b>1.709</b>	<b>0.173</b>	<b>0.393</b>	<b>0.255</b>
%RSD	0.094	0.539	0.500	0.185	0.321	0.037	1.062	0.306	0.250
	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading	Reading
#1	0.660	0.079	0.048	6.351	0.491	0.245	9.106	0.272	0.020
#2	0.659	0.080	0.048	6.336	0.493	0.247	9.098	0.272	0.020
<b>Mean</b>	<b>0.660</b>	<b>0.079</b>	<b>0.048</b>	<b>6.343</b>	<b>0.492</b>	<b>0.246</b>	<b>9.102</b>	<b>0.272</b>	<b>0.020</b>
%RSD	0.096	0.714	0.295	0.164	0.288	0.546	0.063	0.052	1.048
	Zr	Pb	Se						
	Reading	Reading	Reading						
#1	45.887								
#2	45.936								
<b>Mean</b>	<b>45.912</b>	<b>0.000</b>	<b>0.000</b>						
%RSD	0.076	0.000	0.000						

**Line calibration information**

Analyte	Reporting name	C0	C1	C2	C3	Correlation coefficient	Low limit	High limit	Date of last regression
Ag 328.068	Ag	-0.0000922	0.4904243	0.0018838	0	1.0000	0.001	4.017	10/10/2011 11:53:08
Al 308.215	Al	-0.0140781	4.1752848	0.0072492	0	1.0000	0.000	101.744	10/10/2011 11:53:08
As 188.042/2	As	0.0081784	0.945748	0.0048071	0	1.0000	-0.010	5.143	10/10/2011 11:53:08
B 248.578/2	B	-0.0076957	0.8892354	0.0008887	0	1.0000	0.002	14.258	10/10/2011 11:53:08
Ba 493.408	Ba	-0.0010371	0.3505838	0.0008888	0	1.0000	0.001	28.720	10/10/2011 11:53:08
Be 313.042	Be	-0.0057203	0.0144018	0.0000045	0	1.0000	0.377	88.382	10/10/2011 11:53:09
Bi 223.061	Bi	-0.0010847	1.6227994	0.0019747	0	1.0000	0.001	3.070	10/10/2011 11:53:09
Ca 317.933	Ca	-0.0417009	2.5999263	0.0051585	0	1.0000	0.017	146.552	10/10/2011 11:53:09
Cd 228.502/2	Cd	-0.0008548	0.1718125	0.0003338	0	1.0000	0.002	27.653	10/10/2011 11:53:09
Co 228.616	Co	0.0003163	0.6060465	0.0012767	0	1.0000	-0.001	8.11	10/10/2011 11:53:09
Cr 267.716	Cr	-0.0010073	0.2899058	0.0001481	0	1.0000	0.003	38.325	10/10/2011 11:53:09
Cu 324.793	Cu	-0.0172728	0.8552785	0.0007554	0	1.0000	0.020	11.594	10/10/2011 11:53:09
Fe 259.94	Fe	-0.0116562	1.0379339	0.0043826	0	1.0000	0.013	124.579	10/10/2011 11:53:09
K 766.491	K	-1.2292	2.193772	0.0044793	0	0.99998	0.515	95.757	10/10/2011 11:53:09
Li 670.784	Li	0.0054332	0.0278919	-0.0000015	0	0.99997	0.077	385.321	10/10/2011 11:53:10
Mg 279.078	Mg	-0.0385418	4.117889	0.0044358	0	0.99998	0.008	108.383	10/10/2011 11:53:10
Mn 257.61	Mn	-0.0008713	0.7801483	0.0046825	0	1.0000	0.001	11.981	10/10/2011 11:53:10
Mo 202.03/2	Mo	-0.0026564	0.8781011	0.001579	0	1.0000	0.002	14.278	10/10/2011 11:53:10
Na 588.995	Na	-0.1172883	0.435098	0.0014133	0	1.0000	0.100	205.696	10/10/2011 11:53:10
Ni 231.604	Ni	-0.0028518	0.2971829	0.0001743	0	1.0000	0.008	33.018	10/10/2011 11:53:10
P 178.287/2	P	-0.010753	2.305588	0.0159248	0	1.0000	0.003	19.154	10/10/2011 11:53:10
Pb 220.351	Pb I	0.0005839	0.1943137	0.0000433	0	1.0000	-0.004	50.883	10/10/2011 11:53:10
Pb 220.352/2	Pb II	-0.0040385	0.3530045	0.0003022	0	1.0000	0.005	27.684	10/10/2011 11:53:10
S 182.04/2	S	-0.0689158	28.1349244	0.4947173	0	1.0000	0.002	1.871	10/10/2011 11:53:10
Sb 208.838/2	Sb	-0.0032411	1.1122791	0.0009868	0	1.0000	0.003	1.798	10/10/2011 11:53:11
Se 196.021	Se I	0.0025101	1.1207525	0.0055844	0	1.0000	-0.002	4.364	10/10/2011 11:53:11
Se 196.021/2	Se II	-0.0041923	0.7289079	0.0030334	0	1.0000	0.003	6.701	10/10/2011 11:53:11
Si 288.158	Si	-0.1435971	1.0707922	0.000598	0	1.0000	0.123	45.054	10/10/2011 11:53:11
Sn 189.889	Sn	0.0016428	3.5742803	0.0203077	0	1.0000	0.000	2.754	10/10/2011 11:53:11
Sr 421.552	Sr	-0.0032424	0.0980752	0.0001279	0	1.0000	0.002	92.684	10/10/2011 11:53:11

# Method report Paragon

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Th 283.7312	Th	-0.0388348	0.9232163	-0.0063579	0	0.99968	0.034	2.244	10/10/2011 11:53:11
Ti 334.941	Ti	-0.0010323	0.0826839	0.0000118	0	1.0000	-0.009	119.000	10/10/2011 11:53:11
Ti 190.8842	Ti	0.0082873	0.9402567	-0.0010175	0	1.0000	-0.008	5.340	10/10/2011 11:53:11
U 385.958	U	-0.0146352	5.77009	0.0097822	0	1.0000	0.001	8.544	10/10/2011 11:53:11
V 292.402	V	-0.0007571	0.3529145	0.000408	0	1.0000	0.002	13.545	10/10/2011 11:53:12
Zn 208.2	Zn	-0.00144	2.7980582	0.0280065	0	1.0000	0.000	3.457	10/10/2011 11:53:12
Zr 339.198	Zr	0.0001149	0.1182034	-0.0000506	0	1.0000	0.008	43.889	10/10/2011 11:53:12

Method : Paragon File : 111010A  
 SampleId1 : MIXBHIGH SampleId2 :  
 Analysis commenced : 10/10/2011 11:53:47  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:35  
 [CV]  
 Position : TUBE6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	2.00042	0.06013	4.98508	9.93178	9.91221	0.97953	0.00818	-0.02688	4.97232
#2	2.00564	0.05695	5.02140	9.97400	9.96216	0.97945	0.00850	-0.02974	4.97405
Mean	2.00303	0.05854	5.00324	9.95289	9.93719	0.97949	0.00834	-0.02831	4.97319
%RSD	0.18411	3.84523	0.51339	0.30000	0.35544	0.00613	2.68326	7.14316	0.02457
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	4.94858	9.86445	10.04883	-0.01218	-0.05997	0.00799	-0.07231	9.81633	9.91975
#2	4.94554	9.86420	10.09292	-0.01290	-0.06964	0.00796	-0.07725	9.82220	9.93963
Mean	4.94706	9.86433	10.07088	-0.01254	-0.06480	0.00798	-0.07478	9.81926	9.92969
%RSD	0.04348	0.00179	0.30954	4.09674	10.55538	0.27192	4.67243	0.04231	0.14156
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.04135	10.07456	49.68904	9.90047	9.84133	0.01267	1.97803	4.95933	4.92458
#2	-0.04161	10.06332	49.59149	9.90030	9.85810	0.01267	1.99215	4.96914	4.96138
Mean	-0.04148	10.06894	49.64026	9.90039	9.84972	0.01267	1.98509	4.96423	4.94298
%RSD	0.44962	0.07893	0.13896	0.00119	0.12037	0.00000	0.50294	0.13984	0.52646
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	49.28122	9.98014	9.90583	1.95550	9.78078	5.02474	-0.05444	4.94578	9.72921
#2	49.52169	9.96390	9.93793	1.96448	9.80046	5.03636	-0.05906	4.95095	9.71877
Mean	49.40146	9.97202	9.92188	1.95999	9.79062	5.03055	-0.05675	4.94837	9.72399
%RSD	0.34420	0.11516	0.22880	0.32384	0.14217	0.16328	5.75110	0.07389	0.07596
	Zr ppm	Pb calc	Se calc						
#1	-0.07277	9.86102	4.93615						
#2	-0.07437	9.87215	4.96397						
Mean	-0.07357	9.86659	4.95006						
%RSD	1.54350	0.07975	0.39735						

Method : Paragon File : 111010A  
 SampleId1 : MIXAHIGH SampleId2 :  
 Analysis commenced : 10/10/2011 11:55:50  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:36  
 [CV]  
 Position : TUBE11

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00036	499.74604	0.00086	-0.00032	0.00096	0.00125	0.00151	504.82254	0.00067
#2	0.00032	501.23451	0.00123	-0.00204	0.00072	0.00117	0.00427	505.44136	0.00010
<b>Mean</b>	<b>-0.00002</b>	<b>500.49027</b>	<b>0.00105</b>	<b>-0.00118</b>	<b>0.00084</b>	<b>0.00121</b>	<b>0.00289</b>	<b>505.13195</b>	<b>0.00038</b>
%RSD	2066.60492	0.21029	25.58817	103.05317	20.69413	4.49266	67.42934	0.08663	105.23650
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00007	0.00231	-0.00770	197.63425	249.10191	9.98546	496.31343	-0.01031	0.00331
#2	-0.00023	0.00211	-0.00770	197.88623	249.63993	10.00018	497.40084	-0.01093	0.00005
<b>Mean</b>	<b>-0.00008</b>	<b>0.00221</b>	<b>-0.00770</b>	<b>197.76024</b>	<b>249.37092</b>	<b>9.99282</b>	<b>496.85713</b>	<b>-0.01062</b>	<b>0.00168</b>
%RSD	277.13547	6.21148	0.06876	0.09010	0.15256	0.10419	0.15476	4.15397	136.87608
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	150.09339	0.00077	0.02776	-0.03080	0.00996	0.00975	0.00266	-0.02053	0.00983
#2	150.41385	0.00110	0.01346	-0.03110	0.00929	0.01558	0.00019	-0.02772	0.01228
<b>Mean</b>	<b>150.25362</b>	<b>0.00094</b>	<b>0.02061</b>	<b>-0.03095</b>	<b>0.00963</b>	<b>0.01267</b>	<b>0.00142</b>	<b>-0.02413</b>	<b>0.01105</b>
%RSD	0.15081	24.65991	49.05736	0.68640	4.94638	32.53383	122.96419	21.08655	15.66103
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01096	0.00128	0.00850	-0.01285	0.00167	-0.00468	0.11278	-0.00981	-0.00424
#2	-0.01388	0.00236	0.00812	-0.02967	0.00054	-0.00109	0.12242	-0.00948	-0.00060
<b>Mean</b>	<b>-0.01242</b>	<b>0.00182</b>	<b>0.00831</b>	<b>-0.02126</b>	<b>0.00110</b>	<b>-0.00288</b>	<b>0.11760</b>	<b>-0.00964</b>	<b>-0.00242</b>
%RSD	16.61330	41.70596	3.27202	55.94503	72.49977	88.11402	5.79595	2.42795	106.26739
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00632	-0.00361	-0.00028						
#2	0.00704	-0.00416	-0.00104						
<b>Mean</b>	<b>0.00668</b>	<b>-0.00388</b>	<b>-0.00066</b>						
%RSD	7.69068	9.99597	81.45581						

Method : Paragon File : 111010A  
SampleId1 : MIXCHIGH SampleId2 :  
Analysis commenced : 10/10/2011 11:57:53  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:36

[CV]

Position : TUBE14

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00440	0.28512	-0.00217	0.01140	-0.00111	0.00518	5.08777	0.03552	-0.00156
#2	-0.00482	0.27794	-0.00397	0.00995	-0.00100	0.00516	5.09987	0.02954	-0.00095
<b>Mean</b>	<b>-0.00461</b>	<b>0.28153</b>	<b>-0.00307</b>	<b>0.01067</b>	<b>-0.00105</b>	<b>0.00517</b>	<b>5.09382</b>	<b>0.03253</b>	<b>-0.00125</b>
%RSD	6.42803	1.80253	41.40636	9.58987	7.05192	0.27754	0.16800	12.99939	34.55737
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>

	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00503	-0.00664	-0.01084	0.00215	-0.05095	0.00829	-0.34240	0.00404	-0.00008
#2	0.00460	-0.00589	-0.01110	-0.00034	-0.06085	0.00821	-0.34487	0.00420	-0.00029
<b>Mean</b>	<b>0.00482</b>	<b>-0.00626</b>	<b>-0.01097</b>	<b>0.00090</b>	<b>-0.05590</b>	<b>0.00825</b>	<b>-0.34364</b>	<b>0.00412</b>	<b>-0.00018</b>
%RSD	6.22244	8.46086	1.71346	195.41062	12.51505	0.69290	0.50830	2.67692	78.47966

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.03985	-0.00107	0.02107	-0.01862	0.01387	50.05233	0.00205	0.00160	-0.00124
#2	-0.04174	-0.00095	0.03076	-0.01930	0.01224	50.08620	0.00127	-0.00153	-0.00175
<b>Mean</b>	<b>-0.04080</b>	<b>-0.00101</b>	<b>0.02592</b>	<b>-0.01896</b>	<b>0.01306</b>	<b>50.06927</b>	<b>0.00166</b>	<b>0.00003</b>	<b>-0.00150</b>
%RSD	3.27611	8.32914	26.43096	2.52912	8.86001	0.04783	33.55754	6811.99054	24.02707

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.05988	0.02058	-0.00133	0.09418	0.00733	0.00927	50.18852	-0.01025	-0.00032
#2	-0.05475	0.01879	-0.00121	0.08722	0.00722	-0.00577	50.20040	-0.01014	-0.00060
<b>Mean</b>	<b>-0.05732</b>	<b>0.01969</b>	<b>-0.00127</b>	<b>0.09070</b>	<b>0.00728</b>	<b>0.00175</b>	<b>50.19446</b>	<b>-0.01020</b>	<b>-0.00046</b>
%RSD	6.31963	6.41949	6.96525	5.43076	1.12480	607.10824	0.01673	0.73078	42.84941

	Zr ppm	Pb calc	Se calc
#1	5.01331	0.00305	-0.00030
#2	5.01794	0.00173	-0.00168
<b>Mean</b>	<b>5.01563</b>	<b>0.00239</b>	<b>-0.00099</b>
%RSD	0.06533	38.91280	98.75124

Method : Paragon File : 111010A  
SampleId1 : ICV SampleId2 :  
Analysis commenced : 10/10/2011 12:29:06  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:36  
[CV]

Position : STD1

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.09800	26.63748	0.25559	0.50490	0.50386	0.25077	0.26532	25.99008	0.25550
#2	0.09770	26.63429	0.26564	0.50745	0.50223	0.25153	0.26369	26.11461	0.25550
<b>Mean</b>	<b>0.09785</b>	<b>26.63588</b>	<b>0.26061</b>	<b>0.50617</b>	<b>0.50304</b>	<b>0.25115</b>	<b>0.26451</b>	<b>26.05234</b>	<b>0.25550</b>
%RSD	0.21542	0.00846	2.72734	0.35693	0.22834	0.21475	0.43430	0.33802	0.00005

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.24919	0.49901	0.50964	10.36036	23.68101	0.23657	26.16243	0.50293	0.49279
#2	0.24944	0.50085	0.50878	10.37326	23.60250	0.23609	26.24966	0.50427	0.49592
<b>Mean</b>	<b>0.24932</b>	<b>0.49993</b>	<b>0.50921</b>	<b>10.36681</b>	<b>23.64176</b>	<b>0.23633</b>	<b>26.20605</b>	<b>0.50360</b>	<b>0.49435</b>
%RSD	0.06857	0.25947	0.11983	0.08804	0.23481	0.14252	0.23538	0.18766	0.44769

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
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#1	24.18622	0.49686	2.57179	0.51498	0.50112	2.59230	0.25221	0.51564	0.50703
#2	24.17562	0.49731	2.57788	0.51664	0.49768	2.60984	0.25088	0.51947	0.50382
<b>Mean</b>	<b>24.18092</b>	<b>0.49709</b>	<b>2.57484</b>	<b>0.51581</b>	<b>0.49940</b>	<b>2.60107</b>	<b>0.25155</b>	<b>0.51756</b>	<b>0.50543</b>
%RSD	0.03100	0.06354	0.16718	0.22758	0.48690	0.47670	0.37322	0.52374	0.44947

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	2.53489	0.52900	0.24962	0.18159	0.24886	0.25582	2.49131	0.24729	0.51818
#2	2.54801	0.53366	0.24877	0.17627	0.24828	0.26847	2.49997	0.24782	0.51906
<b>Mean</b>	<b>2.54145</b>	<b>0.53133</b>	<b>0.24920</b>	<b>0.17893</b>	<b>0.24857</b>	<b>0.26214</b>	<b>2.49564</b>	<b>0.24756</b>	<b>0.51862</b>
%RSD	0.36507	0.61951	0.24157	2.10151	0.16475	3.41358	0.24535	0.15217	0.11928

	Zr	Pb	Se
	ppm	calc	calc
#1	0.51095	0.50574	0.50990
#2	0.51027	0.50400	0.50903
<b>Mean</b>	<b>0.51061</b>	<b>0.50487</b>	<b>0.50947</b>
%RSD	0.09434	0.24382	0.12025

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:36

SampleId1 : ICB

SampleId2 :

[CB]

Analysis commenced : 10/10/2011 12:31:01

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD2

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00004	0.03490	-0.00245	-0.00439	-0.00030	0.00021	-0.00045	0.04072	-0.00005
#2	0.00023	0.03607	0.00313	-0.00515	-0.00013	0.00026	-0.00143	0.04462	0.00022
<b>Mean</b>	<b>0.00013</b>	<b>0.03548</b>	<b>0.00034</b>	<b>-0.00477</b>	<b>-0.00021</b>	<b>0.00024</b>	<b>-0.00094</b>	<b>0.04267</b>	<b>0.00009</b>
%RSD	103.40220	2.32183	1173.82058	11.24753	58.13822	14.61368	73.24721	6.46322	220.50146

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00008	0.00021	-0.00084	0.01149	-0.04745	0.00787	0.01334	0.00006	-0.00042
#2	0.00026	0.00035	-0.00058	0.01388	-0.05106	0.00788	0.02199	0.00014	-0.00001
<b>Mean</b>	<b>0.00017</b>	<b>0.00028</b>	<b>-0.00071</b>	<b>0.01268</b>	<b>-0.04925</b>	<b>0.00788</b>	<b>0.01767</b>	<b>0.00010</b>	<b>-0.00022</b>
%RSD	76.06110	34.32681	25.64503	13.31125	5.18791	0.07779	34.61362	53.10633	132.45758

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.03851	-0.00092	0.00032	-0.00084	-0.00011	0.01267	-0.00336	0.00306	0.00075
#2	-0.03525	0.00006	0.00424	-0.00329	-0.00233	0.00684	-0.00002	0.00194	0.00148
<b>Mean</b>	<b>-0.03688</b>	<b>-0.00043</b>	<b>0.00228</b>	<b>-0.00207</b>	<b>-0.00122</b>	<b>0.00975</b>	<b>-0.00169</b>	<b>0.00250</b>	<b>0.00111</b>
%RSD	6.25225	161.39348	121.78071	83.73957	128.67837	42.25424	139.81249	31.78762	46.14433

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01175	0.00021	-0.00254	-0.00170	-0.00133	-0.00065	-0.01060	-0.00026	-0.00028

#2	-0.01196	-0.00050	-0.00240	-0.00472	-0.00135	-0.00020	-0.01349	0.00016	0.00059
<b>Mean</b>	<b>-0.01186</b>	<b>-0.00014</b>	<b>-0.00247</b>	<b>-0.00321</b>	<b>-0.00134</b>	<b>-0.00043</b>	<b>-0.01205</b>	<b>-0.00005</b>	<b>0.00016</b>
%RSD	1.24147	354.06871	4.12738	66.60040	1.30638	75.08459	16.94306	614.44832	389.42270

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.00184	-0.00035	0.00152
#2	0.00222	-0.00265	0.00163
<b>Mean</b>	<b>0.00203</b>	<b>-0.00150</b>	<b>0.00158</b>
%RSD	13.19766	108.08868	4.97721

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:36

SampleId1 : CRI

SampleId2 :

[FLEXQC]

Analysis commenced : 10/10/2011 12:33:04

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD3

Final concentrations

	<b>Ag</b> ppm	<b>Al</b> ppm	<b>As</b> ppm	<b>B</b> ppm	<b>Ba</b> ppm	<b>Be</b> ppm	<b>Bi</b> ppm	<b>Ca</b> ppm	<b>Cd</b> ppm
#1	0.02006	0.47029	0.01466	0.40989	0.41379	0.01231	0.04489	5.47339	0.01204
#2	0.01971	0.46572	0.01287	0.41397	0.41556	0.01231	0.05057	5.46631	0.01172
<b>Mean</b>	<b>0.01988</b>	<b>0.46800</b>	<b>0.01377</b>	<b>0.41193</b>	<b>0.41467</b>	<b>0.01231</b>	<b>0.04773</b>	<b>5.46985</b>	<b>0.01188</b>
%RSD	1.22240	0.69193	9.23097	0.69914	0.30071	0.00793	8.41389	0.09151	1.86792

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	0.10204	0.02116	0.05144	0.21232	3.93746	0.02406	5.38017	0.03261	0.01992
#2	0.10259	0.02079	0.05084	0.21212	3.94906	0.02411	5.39421	0.03245	0.01986
<b>Mean</b>	<b>0.10231</b>	<b>0.02098</b>	<b>0.05114</b>	<b>0.21222</b>	<b>3.94326</b>	<b>0.02409</b>	<b>5.38719</b>	<b>0.03253</b>	<b>0.01989</b>
%RSD	0.37807	1.27499	0.82852	0.06929	0.20799	0.16114	0.18428	0.33936	0.24111

	<b>Na</b> ppm	<b>Ni</b> ppm	<b>P</b> ppm	<b>Pb I</b> ppm	<b>Pb II</b> ppm	<b>S</b> ppm	<b>Sb</b> ppm	<b>Se I</b> ppm	<b>Se II</b> ppm
#1	4.20486	0.08151	0.21077	0.00320	0.00680	0.20791	0.11918	0.01586	0.00973
#2	4.21373	0.08171	0.20869	0.00332	0.00775	0.21374	0.12364	0.00678	0.01249
<b>Mean</b>	<b>4.20930</b>	<b>0.08161</b>	<b>0.20973</b>	<b>0.00326</b>	<b>0.00728</b>	<b>0.21083</b>	<b>0.12141</b>	<b>0.01132</b>	<b>0.01111</b>
%RSD	0.14900	0.18031	0.70064	2.54373	9.25821	1.95501	2.59369	56.71916	17.58002

	<b>Si</b> ppm	<b>Sn</b> ppm	<b>Sr</b> ppm	<b>Th</b> ppm	<b>Ti</b> ppm	<b>Tl</b> ppm	<b>U</b> ppm	<b>V</b> ppm	<b>Zn</b> ppm
#1	0.09942	0.11244	0.01898	0.00993	0.02033	0.01887	0.18084	0.10354	0.06396
#2	0.09931	0.10994	0.01902	0.01496	0.02092	0.02270	0.18141	0.10364	0.06658
<b>Mean</b>	<b>0.09936</b>	<b>0.11119</b>	<b>0.01900</b>	<b>0.01244</b>	<b>0.02063</b>	<b>0.02079</b>	<b>0.18113</b>	<b>0.10359</b>	<b>0.06527</b>
%RSD	0.07743	1.59213	0.14314	28.58381	2.04052	13.00643	0.22534	0.07229	2.83477

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.05395	0.00560	0.01177
#2	0.05393	0.00628	0.01059

Mean 0.05394 0.00594 0.01118UNDGREEN  
 %RSD 0.02544 8.03034 7.47426

Method : Paragon File : 111010A  
 SampleId1 : ICSA SampleId2 :  
 Analysis commenced : 10/10/2011 12:34:58  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:37  
 [FLEXQC]

Position : STD4

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00125	275.60490	-0.00056	-0.00742	-0.00058	0.00077	0.00605	269.67962	0.00025
#2	0.00008	276.70500	0.00237	-0.00583	-0.00055	0.00079	0.00361	270.26740	0.00033
Mean	-0.00059	276.15495	0.00090	-0.00663	-0.00056	0.00078	0.00483	269.97351	0.00029
%RSD	160.04320	0.28168	229.44108	16.91378	4.39707	1.76782	35.61947	0.15395	20.29030

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.00032	-0.00111	-0.00448	110.06403	-0.08358	0.00802	272.76215	0.00295	-0.00422
#2	0.00062	-0.00109	-0.00414	110.37827	-0.08719	0.00802	273.71940	0.00303	-0.00130
Mean	0.00047	-0.00110	-0.00431	110.22115	-0.08539	0.00802	273.24077	0.00299	-0.00276
%RSD	45.71514	1.70200	5.60090	0.20159	2.99227	0.02546	0.24772	1.84476	74.70056

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.03784	0.00068	0.00378	-0.01897	0.00408	0.05346	0.00052	-0.02014	-0.00420
#2	-0.03818	0.00003	0.00285	-0.01928	0.00099	0.06220	0.00054	-0.01727	0.00480
Mean	-0.03801	0.00036	0.00331	-0.01912	0.00253	0.05783	0.00053	-0.01871	0.00030
%RSD	0.62452	129.18585	19.68184	1.14178	86.29645	10.68876	3.27427	10.87739	2148.26401

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.02225	0.00057	-0.00152	-0.04559	0.00014	-0.00150	0.04776	-0.00565	-0.00144
#2	-0.01902	-0.00086	-0.00153	-0.03447	0.00017	-0.00247	0.04870	-0.00583	0.00059
Mean	-0.02063	-0.00014	-0.00153	-0.04003	0.00016	-0.00199	0.04823	-0.00574	-0.00042
%RSD	11.04590	699.63497	0.44479	19.65010	14.79350	34.22236	1.37848	2.29324	340.12864

	Zr ppm	Pb calc	Se calc
#1	0.00623	-0.00359	-0.00951
#2	0.00589	-0.00576	-0.00255
Mean	0.00606	-0.00468	-0.00603
%RSD	3.96335	32.74479	81.59242

Method : Paragon File : 111010A  
 SampleId1 : ICSAB SampleId2 :  
 Analysis commenced : 10/10/2011 12:36:52  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:37  
 [FLEXQC]

Position : STD5

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19011	217.19421	0.09982	0.98561	0.49150	0.47052	0.52082	266.51918	0.97243
#2	0.18930	215.91685	0.09623	0.98568	0.49093	0.47033	0.52422	265.26050	0.96986
Mean	0.18970	216.55553	0.09803	0.98565	0.49121	0.47043	0.52252	265.88984	0.97115
%RSD	0.30298	0.41709	2.59487	0.00496	0.08132	0.02926	0.45985	0.33473	0.18717

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.46020	0.45412	0.51719	109.14070	-0.07951	1.01731	269.46648	0.47385	0.94493
#2	0.45936	0.45227	0.51644	108.80650	-0.08516	1.01225	268.66609	0.47315	0.94050
Mean	0.45978	0.45320	0.51681	108.97360	-0.08234	1.01478	269.06628	0.47350	0.94271
%RSD	0.13048	0.28882	0.10250	0.21685	4.84857	0.35224	0.21034	0.10562	0.33275

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.05832	0.91681	1.00905	0.03324	0.05585	1.05643	0.58452	0.03087	0.05417
#2	-0.05630	0.91433	1.01184	0.02746	0.05589	1.06810	0.57827	0.03750	0.05294
Mean	-0.05731	0.91557	1.01045	0.03035	0.05587	1.06226	0.58140	0.03418	0.05356
%RSD	2.48460	0.19120	0.19483	13.46678	0.03892	0.77678	0.76051	13.71809	1.62417

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	0.92956	1.03272	0.96966	0.07100	0.92835	0.09793	9.64054	0.45842	0.92435
#2	0.92884	1.02949	0.96624	0.06472	0.92666	0.09677	9.61291	0.45871	0.92318
Mean	0.92920	1.03111	0.96795	0.06786	0.92750	0.09735	9.62672	0.45857	0.92376
%RSD	0.05522	0.22119	0.24929	6.54165	0.12833	0.84070	0.20292	0.04459	0.08952

	Zr ppm	Pb calc	Se calc
#1	0.48201	0.04832	0.04641
#2	0.48094	0.04642	0.04780
Mean	0.48147	0.04737	0.04711
%RSD	0.15701	2.84228	2.08325

Method : Paragon File : 111010A  
SampleId1 : CCV SampleId2 :  
Analysis commenced : 10/10/2011 12:38:47  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:37  
[CV]

Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19536	53.59581	0.50664	1.01398	1.00301	0.49048	0.52986	51.92974	0.50616
#2	0.19471	53.44513	0.51120	1.01543	1.00088	0.49188	0.52659	52.07080	0.50687
Mean	0.19504	53.52047	0.50892	1.01470	1.00194	0.49118	0.52823	52.00027	0.50651
%RSD	0.23536	0.19908	0.63412	0.10125	0.15059	0.20233	0.43769	0.19181	0.09984

ted: 10/11/2011 11:38:21 User: MIKE LUNDGREEN

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.48720	0.97189	1.02304	20.85117	50.17799	0.50751	52.29820	0.98345	0.99237
#2	0.48799	0.97530	1.01965	20.85045	50.02490	0.50540	52.20474	0.98598	0.99012
<b>Mean</b>	<b>0.48760</b>	<b>0.97359</b>	<b>1.02134</b>	<b>20.85081</b>	<b>50.10144</b>	<b>0.50646</b>	<b>52.25147</b>	<b>0.98472</b>	<b>0.99125</b>
%RSD	0.11431	0.24774	0.23497	0.00244	0.21605	0.29475	0.12647	0.18197	0.16071

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	50.23424	0.97638	5.14877	1.00148	0.99199	5.24416	0.49707	1.01961	1.01441
#2	50.13624	0.97662	5.14330	1.00334	0.99808	5.23244	0.49802	1.03914	1.01353
<b>Mean</b>	<b>50.18524</b>	<b>0.97650</b>	<b>5.14603</b>	<b>1.00241</b>	<b>0.99504</b>	<b>5.23830</b>	<b>0.49755</b>	<b>1.02937</b>	<b>1.01397</b>
%RSD	0.13808	0.01728	0.07510	0.13090	0.43291	0.15828	0.13465	1.34151	0.06146

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.97248	1.06336	0.49840	0.36180	0.48781	0.51951	4.91753	0.48613	1.00185
#2	4.97329	1.05977	0.49765	0.35791	0.48746	0.52985	4.87297	0.48645	1.00624
<b>Mean</b>	<b>4.97289</b>	<b>1.06156</b>	<b>0.49803</b>	<b>0.35985</b>	<b>0.48763</b>	<b>0.52468</b>	<b>4.89525</b>	<b>0.48629</b>	<b>1.00404</b>
%RSD	0.01158	0.23886	0.10648	0.76579	0.05043	1.39325	0.64362	0.04631	0.30903

	Zr	Pb	Se
	ppm	calc	calc
#1	1.00305	0.99515	1.01614
#2	1.00088	0.99983	1.02206
<b>Mean</b>	<b>1.00197</b>	<b>0.99749</b>	<b>1.01910</b>
%RSD	0.15332	0.33185	0.41044

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:37

SampleId1 : CCB

SampleId2 :

[CB]

Analysis commenced : 10/10/2011 12:42:23

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD2

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00040	0.07577	0.00057	-0.00290	-0.00058	0.00027	0.00376	0.05112	-0.00010
#2	-0.00020	0.09271	-0.00179	-0.00256	-0.00051	0.00033	-0.00127	0.06855	0.00000
<b>Mean</b>	<b>-0.00030</b>	<b>0.08424</b>	<b>-0.00061</b>	<b>-0.00273</b>	<b>-0.00055</b>	<b>0.00030</b>	<b>0.00125</b>	<b>0.05983</b>	<b>-0.00005</b>
%RSD	47.20517	14.21582	274.23262	8.92165	9.07635	13.66868	285.30544	20.58918	137.14780

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00041	-0.00043	-0.00170	0.01782	-0.07026	0.00382	0.03393	-0.00025	-0.00069
#2	-0.00083	-0.00102	-0.00144	0.02665	-0.07997	0.00384	0.05164	-0.00025	-0.00110
<b>Mean</b>	<b>-0.00062</b>	<b>-0.00073</b>	<b>-0.00157</b>	<b>0.02224</b>	<b>-0.07511</b>	<b>0.00383</b>	<b>0.04278</b>	<b>-0.00025</b>	<b>-0.00090</b>
%RSD	48.49232	57.23911	11.82859	28.06426	9.14204	0.32018	29.26455	0.00000	32.13378

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.05769	-0.00107	0.00147	-0.00386	-0.00173	-0.00190	-0.00235	-0.00098	-0.00244
#2	-0.05764	-0.00140	-0.00153	-0.00381	-0.00087	0.00101	-0.00268	0.00294	-0.00070
Mean	-0.05767	-0.00123	-0.00003	-0.00384	-0.00130	-0.00045	-0.00252	0.00098	-0.00157
%RSD	0.05879	18.76146	7121.27831	0.98495	46.39536	461.95743	9.29540	282.04748	78.51557

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.01571	-0.00121	-0.00273	-0.00673	-0.00156	-0.00048	-0.01234	-0.00029	0.00030
#2	-0.01774	-0.00229	-0.00269	-0.00519	-0.00151	0.00326	-0.01927	-0.00100	-0.00057
Mean	-0.01673	-0.00175	-0.00271	-0.00596	-0.00154	0.00139	-0.01580	-0.00065	-0.00013
%RSD	8.56529	43.30534	1.00127	18.25721	2.28245	189.73691	31.00611	76.96580	465.95259

	Zr ppm	Pb calc	Se calc
#1	0.00151	-0.00244	-0.00196
#2	0.00137	-0.00185	0.00051
Mean	0.00144	-0.00215	-0.00072
%RSD	7.09087	19.36060	241.86171

Method : Paragon File : 111010A  
SampleId1 : F111006-1MB SampleId2 :  
Analysis commenced : 10/10/2011 12:44:19  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:37  
[SAMPLE]

Position : TUBE1

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00015	0.02339	0.00076	0.00985	0.00324	0.00011	-0.00663	0.49280	-0.00052
#2	-0.00011	0.02482	0.00010	0.01143	0.00328	0.00009	-0.00695	0.49410	-0.00036
Mean	-0.00013	0.02410	0.00043	0.01064	0.00326	0.00010	-0.00679	0.49345	-0.00044
%RSD	23.81960	4.19163	108.69712	10.53548	0.76101	14.98660	3.35393	0.18643	25.70980

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00052	-0.00065	-0.00178	-0.00273	-0.05896	0.00368	-0.01219	-0.00064	-0.00130
#2	-0.00076	-0.00076	-0.00135	-0.00200	-0.06958	0.00367	-0.00395	-0.00056	-0.00313
Mean	-0.00064	-0.00070	-0.00157	-0.00237	-0.06427	0.00367	-0.00807	-0.00060	-0.00222
%RSD	26.64471	11.18963	19.11223	21.69450	11.67807	0.16683	72.15433	9.22088	58.37921

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	1.92837	-0.00166	-0.00337	-0.00193	-0.00332	-0.01064	-0.00169	-0.00031	-0.00092
#2	1.92925	-0.00250	0.00401	-0.00283	-0.00180	-0.02230	-0.00315	0.00351	-0.00143
Mean	1.92881	-0.00208	0.00032	-0.00238	-0.00256	-0.01647	-0.00242	0.00160	-0.00118
%RSD	0.03240	28.30108	1650.35585	26.66756	41.74015	50.03307	42.69801	168.54285	30.53879

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.02553	0.00164	-0.00268	0.00064	-0.00170	0.00415	-0.01925	-0.00016	0.00466
#2	0.02444	0.00022	-0.00266	-0.00294	-0.00169	0.00206	-0.01348	-0.00083	0.00437
<b>Mean</b>	<b>0.02499</b>	<b>0.00093</b>	<b>-0.00267</b>	<b>-0.00115</b>	<b>-0.00170</b>	<b>0.00311</b>	<b>-0.01636</b>	<b>-0.00049</b>	<b>0.00452</b>
%RSD	3.07689	108.71309	0.50966	220.42302	0.34429	47.51380	24.93004	96.18380	4.54892

	Zr ppm	Pb calc	Se calc
#1	0.00084	-0.00285	-0.00072
#2	0.00129	-0.00215	0.00021
<b>Mean</b>	<b>0.00106</b>	<b>-0.00250</b>	<b>-0.00025</b>
%RSD	29.97792	20.06212	260.94616

Method : Paragon File : 111010A  
SampleId1 : F111006-1RVS SampleId2 :  
Analysis commenced : 10/10/2011 12:46:09  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:38  
[SAMPLE]  
Position : TUBE2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00829	1.01952	0.05269	0.04797	0.04827	0.01008	0.09678	4.99458	0.01949
#2	0.00804	1.02891	0.04948	0.04783	0.04838	0.01020	0.10149	5.01894	0.01910
<b>Mean</b>	<b>0.00817</b>	<b>1.02421</b>	<b>0.05108</b>	<b>0.04790</b>	<b>0.04833</b>	<b>0.01014</b>	<b>0.09914</b>	<b>5.00676</b>	<b>0.01929</b>
%RSD	2.18170	0.64803	4.45293	0.20354	0.15400	0.82274	3.35992	0.34411	1.42965

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.01853	0.04752	0.04788	0.98786	7.79208	0.04221	4.98091	0.04783	0.09461
#2	0.01847	0.04738	0.04856	0.99289	7.80536	0.04231	4.98999	0.04783	0.09550
<b>Mean</b>	<b>0.01850</b>	<b>0.04745</b>	<b>0.04822</b>	<b>0.99038</b>	<b>7.79872</b>	<b>0.04226</b>	<b>4.98545</b>	<b>0.04783</b>	<b>0.09505</b>
%RSD	0.23162	0.20665	0.99559	0.35860	0.12039	0.16918	0.12882	0.00000	0.65621

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	8.18860	0.04785	1.00441	0.04789	0.04764	1.02142	0.09818	0.05165	0.04760
#2	8.20874	0.04812	1.00975	0.04760	0.04986	0.98350	0.09786	0.05322	0.05109
<b>Mean</b>	<b>8.19867</b>	<b>0.04799</b>	<b>1.00708</b>	<b>0.04775</b>	<b>0.04875</b>	<b>1.00246</b>	<b>0.09802</b>	<b>0.05244</b>	<b>0.04934</b>
%RSD	0.17371	0.39420	0.37466	0.43194	3.21966	2.67495	0.23431	2.12359	5.00171

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	0.26672	0.10169	0.04564	0.00053	0.04600	0.10560	0.46887	0.04779	0.04855
#2	0.26960	0.10455	0.04595	-0.00526	0.04607	0.10087	0.47579	0.04765	0.04826
<b>Mean</b>	<b>0.26816</b>	<b>0.10312</b>	<b>0.04580</b>	<b>-0.00236</b>	<b>0.04603</b>	<b>0.10323</b>	<b>0.47233</b>	<b>0.04772</b>	<b>0.04841</b>
%RSD	0.76105	1.96141	0.47531	173.45523	0.10160	3.23715	1.03636	0.20780	0.42464

	Zr ppm	Pb calc	Se calc
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#1	0.05048	0.04772	0.04895	UNDGREEN
#2	0.05095	0.04911	0.05180	
Mean	0.05071	0.04841	0.05037	
%RSD	0.66085	2.02040	4.00405	

Method : Paragon File : 111010A  
SampleId1 : F111006-1LCS SampleId2 :  
Analysis commenced : 10/10/2011 12:47:57  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:38  
[SAMPLE]

Position : TUBE3

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00006	1.97803	1.97067	0.49464	1.94170	0.04936	-0.00264	0.48760	0.04907
#2	0.00014	1.98197	1.96169	0.49754	1.94887	0.04932	-0.00279	0.48734	0.04978
Mean	0.00004	1.98000	1.96618	0.49609	1.94528	0.04934	-0.00272	0.48747	0.04942
%RSD	363.34390	0.14058	0.32290	0.41339	0.26063	0.05891	4.00292	0.03774	1.02234

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.47980	0.19471	0.24744	0.99540	-0.05919	0.00370	-0.03031	0.48965	0.96043
#2	0.48102	0.19468	0.24915	0.99875	-0.06258	0.00370	-0.02248	0.48934	0.95927
Mean	0.48041	0.19470	0.24830	0.99707	-0.06088	0.00370	-0.02639	0.48949	0.95985
%RSD	0.18012	0.01104	0.48600	0.23748	3.93444	0.05518	20.95940	0.04542	0.08548

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	1.98264	0.49719	10.32261	0.48865	0.47559	9.92951	0.48103	1.95890	1.92786
#2	1.98982	0.49597	10.29744	0.48974	0.47792	9.95015	0.48447	1.95183	1.94612
Mean	1.98623	0.49658	10.31003	0.48920	0.47676	9.93983	0.48275	1.95537	1.93699
%RSD	0.25539	0.17385	0.17268	0.15703	0.34548	0.14677	0.50405	0.25544	0.66685

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	2.02201	0.51192	0.48319	-0.00114	0.47028	1.98167	-0.02801	0.48401	0.50944
#2	2.02705	0.51621	0.48426	0.00006	0.47143	1.97633	-0.02166	0.48476	0.50856
Mean	2.02453	0.51407	0.48373	-0.00054	0.47086	1.97900	-0.02483	0.48439	0.50900
%RSD	0.17586	0.59076	0.15656	156.43118	0.17283	0.19079	18.06515	0.10863	0.12152

	Zr ppm	Pb calc	Se calc
#1	0.00437	0.47994	1.93819
#2	0.00348	0.48186	1.94802
Mean	0.00392	0.48090	1.94311
%RSD	16.06514	0.28165	0.35779

Method : Paragon File : 111010A  
SampleId1 : 1109351-1 SampleId2 :  
Analysis commenced : 10/10/2011 12:49:46

Printed : 10/11/2011 11:37:38  
[SAMPLE]



Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE4

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00054	0.01044	0.00114	0.00447	0.04761	0.00024	-0.00468	10.14899	-0.00050
#2	-0.00054	0.01226	0.00237	0.00440	0.04715	0.00018	-0.00500	10.14450	-0.00048
<b>Mean</b>	<b>-0.00054</b>	<b>0.01135</b>	<b>0.00175</b>	<b>0.00444</b>	<b>0.04738</b>	<b>0.00021</b>	<b>-0.00484</b>	<b>10.14674</b>	<b>-0.00049</b>
%RSD	0.53785	11.34285	49.54515	1.09849	0.68069	17.05349	4.73021	0.03128	3.74345

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00040	-0.00081	-0.00135	0.01222	0.51180	0.00729	1.54907	0.03073	0.01531
#2	-0.00058	-0.00057	-0.00144	0.01274	0.51587	0.00730	1.54289	0.03073	0.01389
<b>Mean</b>	<b>-0.00049</b>	<b>-0.00069</b>	<b>-0.00139</b>	<b>0.01248</b>	<b>0.51383</b>	<b>0.00729</b>	<b>1.54598</b>	<b>0.03073</b>	<b>0.01460</b>
%RSD	26.22030	24.69127	4.54348	2.94190	0.55998	0.08406	0.28274	0.00000	6.89744

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	86.33845	-0.00175	0.00032	-0.00201	-0.00011	21.24827	-0.00210	0.00216	0.00177
#2	85.92097	-0.00232	-0.00061	-0.00185	-0.00143	21.20648	-0.00123	0.00418	0.00053
<b>Mean</b>	<b>86.12971</b>	<b>-0.00203</b>	<b>-0.00015</b>	<b>-0.00193</b>	<b>-0.00077</b>	<b>21.22737</b>	<b>-0.00166</b>	<b>0.00317</b>	<b>0.00115</b>
%RSD	0.34274	19.62509	449.59177	5.59796	120.36246	0.13920	37.19163	45.13215	75.90920

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.11734	-0.00300	0.18852	-0.00187	-0.00124	0.00408	-0.01984	-0.00040	0.00030
#2	3.10656	0.00021	0.18757	-0.00180	-0.00135	-0.00284	-0.01464	-0.00040	-0.00028
<b>Mean</b>	<b>3.11195</b>	<b>-0.00139</b>	<b>0.18804</b>	<b>-0.00184</b>	<b>-0.00129</b>	<b>0.00062</b>	<b>-0.01724</b>	<b>-0.00040</b>	<b>0.00001</b>
%RSD	0.24491	163.20321	0.35955	2.55118	5.87820	791.68849	21.29784	0.01771	3161.40379

	Zr ppm	Pb calc	Se calc
#1	0.00005	-0.00074	0.00190
#2	0.00018	-0.00157	0.00175
<b>Mean</b>	<b>0.00011</b>	<b>-0.00116</b>	<b>0.00182</b>
%RSD	78.07151	50.39140	5.84680

Method : Paragon File : 111010A  
 SampleId1 : 1109351-2 SampleId2 :  
 Analysis commenced : 10/10/2011 12:51:34  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:38  
 [SAMPLE]

Position : TUBE5

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00044	0.01110	0.00161	0.00351	0.04666	0.00013	-0.00176	10.01066	-0.00078
#2	-0.00006	0.01438	-0.00217	0.00475	0.04677	0.00012	0.00052	9.94045	-0.00039

<b>Mean</b>	-0.00025	0.01274	-0.00028	0.00413	0.04671	0.00013	-0.00062	9.97556	-0.00059
<b>%RSD</b>	109.70833	18.16781	960.06109	21.25890	0.15932	6.90299	259.49502	0.49766	46.54520

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00131	-0.00134	-0.00186	0.01377	0.51316	0.00724	1.52229	0.03065	0.01443
#2	-0.00022	-0.00043	-0.00144	0.01398	0.49982	0.00724	1.51981	0.03065	0.01389
<b>Mean</b>	-0.00076	-0.00089	-0.00165	0.01388	0.50649	0.00724	1.52105	0.03065	0.01416
<b>%RSD</b>	100.90862	72.47193	17.92117	1.05793	1.86211	0.02822	0.11495	0.00000	2.70939

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	85.28430	-0.00178	-0.00476	-0.00148	0.00056	20.89014	-0.00210	-0.00625	-0.00019
#2	85.09287	-0.00217	0.00331	-0.00160	0.00013	20.93788	-0.00334	0.00451	0.00053
<b>Mean</b>	85.18859	-0.00198	-0.00072	-0.00154	0.00034	20.91401	-0.00272	-0.00087	0.00017
<b>%RSD</b>	0.15890	13.83179	790.97048	5.39354	89.69499	0.16142	32.14349	875.66219	302.12432

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.08258	0.00057	0.18631	-0.00232	-0.00130	0.00089	-0.02618	-0.00075	-0.00144
#2	3.07879	-0.00050	0.18590	-0.00578	-0.00151	0.00499	-0.01349	-0.00019	-0.00028
<b>Mean</b>	3.08068	0.00004	0.18611	-0.00405	-0.00140	0.00294	-0.01984	-0.00047	-0.00086
<b>%RSD</b>	0.08696	2103.97612	0.15412	60.47066	10.82215	98.75969	45.24718	84.58863	95.70785

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00005	-0.00012	-0.00221
#2	0.00061	-0.00045	0.00186
<b>Mean</b>	0.00033	-0.00028	-0.00018
<b>%RSD</b>	119.57151	81.93354	1633.69870

Method : Paragon File : 111010A  
SampleId1 : 1109351-4 SampleId2 :  
Analysis commenced : 10/10/2011 12:53:22  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:38  
[SAMPLE]

Position : TUBE6

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00128	-0.00205	0.00199	0.00358	0.04501	0.00013	-0.00013	9.68450	-0.00035
#2	0.00005	-0.00163	-0.00066	0.00530	0.04547	0.00008	0.00019	9.72486	-0.00068
<b>Mean</b>	-0.00061	-0.00184	0.00067	0.00444	0.04524	0.00010	0.00003	9.70468	-0.00052
<b>%RSD</b>	152.11598	16.03280	280.68606	27.46218	0.71287	34.37621	810.48019	0.29412	44.53884

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00113	-0.00116	-0.00186	-0.00325	0.48806	0.00712	1.46336	0.02941	0.01423
#2	-0.00113	-0.00075	-0.00118	-0.00252	0.48671	0.00713	1.47902	0.02972	0.01274
<b>Mean</b>	-0.00113	-0.00096	-0.00152	-0.00289	0.48738	0.00712	1.47119	0.02956	0.01348

%RSD	0.03018	29.91819	31.80870	17.79474	0.19678	0.11474	0.75266	0.74679	7.82561
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	82.38519	-0.00190	-0.00476	-0.00356	0.00027	20.18623	-0.00211	-0.00759	-0.00092
#2	82.64894	-0.00151	0.00009	-0.00376	0.00253	20.32339	-0.00246	-0.00625	0.00177
<b>Mean</b>	<b>82.51707</b>	<b>-0.00171</b>	<b>-0.00234</b>	<b>-0.00366</b>	<b>0.00140</b>	<b>20.25481</b>	<b>-0.00228</b>	<b>-0.00692</b>	<b>0.00042</b>
%RSD	0.22602	15.99835	146.59972	3.81165	114.08323	0.47883	10.85936	13.74348	451.64635
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	2.96309	-0.00157	0.18128	-0.00408	-0.00202	-0.00039	-0.01867	-0.00055	0.00408
#2	2.98623	0.00165	0.18261	-0.00889	-0.00195	0.00298	-0.01867	-0.00016	0.00379
<b>Mean</b>	<b>2.97466</b>	<b>0.00004</b>	<b>0.18194</b>	<b>-0.00649</b>	<b>-0.00199</b>	<b>0.00129</b>	<b>-0.01867</b>	<b>-0.00035</b>	<b>0.00394</b>
%RSD	0.54989	6196.02303	0.51791	52.42622	2.64744	184.24082	0.00187	78.05982	5.22060
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00012	-0.00100	-0.00314						
#2	0.00064	0.00044	-0.00090						
<b>Mean</b>	<b>0.00038</b>	<b>-0.00028</b>	<b>-0.00202</b>						
%RSD	97.93477	358.21588	78.32260						

Method : Paragon File : 111010A  
SampleId1 : 1109351-5 SampleId2 :  
Analysis commenced : 10/10/2011 12:55:10  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:38  
[SAMPLE]

Position : TUBE7

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00034	-0.00483	-0.00217	0.01323	0.04736	0.00002	-0.00435	9.80165	-0.00015
#2	0.00004	-0.00791	0.00180	0.01371	0.04729	0.00003	-0.00078	9.75019	-0.00025
<b>Mean</b>	<b>0.00019</b>	<b>-0.00637</b>	<b>-0.00018</b>	<b>0.01347</b>	<b>0.04733</b>	<b>0.00003</b>	<b>-0.00257</b>	<b>9.77592</b>	<b>-0.00020</b>
%RSD	114.46799	34.20765	1526.07685	2.53357	0.10484	26.49778	98.50114	0.37216	33.65781
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00058	-0.00051	-0.00178	-0.00325	0.50276	0.00715	1.48932	0.02527	0.01233
#2	-0.00040	-0.00057	-0.00136	-0.00294	0.50253	0.00713	1.48850	0.02519	0.01355
<b>Mean</b>	<b>-0.00049</b>	<b>-0.00054</b>	<b>-0.00157</b>	<b>-0.00309</b>	<b>0.50264</b>	<b>0.00714</b>	<b>1.48891</b>	<b>0.02523</b>	<b>0.01294</b>
%RSD	26.26537	7.66014	18.92036	7.11474	0.03180	0.17169	0.03914	0.21874	6.67122
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	84.37091	-0.00104	-0.00706	-0.00014	0.00154	20.11766	-0.00068	0.00306	-0.00354
#2	83.96742	-0.00095	-0.00799	0.00346	-0.00094	20.18921	-0.00012	-0.00545	-0.00281
<b>Mean</b>	<b>84.16917</b>	<b>-0.00099</b>	<b>-0.00752</b>	<b>0.00166</b>	<b>0.00030</b>	<b>20.15344</b>	<b>-0.00040</b>	<b>-0.00120</b>	<b>-0.00318</b>
%RSD	0.33897	6.34021	8.66822	153.50842	592.80650	0.25105	100.11713	503.54718	16.17538

ted: 10/11/2011 11:38:21 User: MIKE LUNDGREEN

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.04843	0.00022	0.17813	-0.00384	-0.00167	0.00425	-0.01348	0.00020	0.00147
#2	3.04541	0.00129	0.17771	-0.00509	-0.00189	-0.00375	-0.00425	-0.00005	0.00118
Mean	3.04692	0.00075	0.17792	-0.00447	-0.00178	0.00025	-0.00886	0.00007	0.00132
%RSD	0.07015	100.94250	0.16885	19.83219	8.86423	2259.71229	73.65406	243.66496	15.55889

	Zr ppm	Pb calc	Se calc
#1	0.00079	0.00098	-0.00134
#2	0.00089	0.00052	-0.00369
Mean	0.00084	0.00075	-0.00252
%RSD	7.76266	42.97002	66.02333

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:39

SampleId1 : 1109381-1

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 12:56:58

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE8

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00064	0.06400	0.00227	0.01902	0.04199	0.00007	-0.00531	45.87267	-0.00080
#2	-0.00011	0.06797	-0.00066	0.01977	0.04238	0.00004	-0.00531	46.06675	-0.00015
Mean	-0.00038	0.06598	0.00081	0.01939	0.04219	0.00006	-0.00531	45.96971	-0.00047
%RSD	100.67416	4.24667	256.26415	2.76448	0.64681	28.70564	0.03224	0.29852	97.68248

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00083	-0.00065	0.00190	0.09592	1.43966	0.01200	11.53653	0.03222	0.00344
#2	-0.00132	-0.00030	0.00198	0.09696	1.44804	0.01204	11.56470	0.03245	0.00426
Mean	-0.00108	-0.00047	0.00194	0.09644	1.44385	0.01202	11.55062	0.03233	0.00385
%RSD	31.85078	51.75475	2.90709	0.76171	0.41031	0.18695	0.17245	0.51211	14.93986

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	7.84532	-0.00101	0.12305	-0.00354	0.00086	9.35204	-0.00265	-0.00245	-0.00010
#2	7.85229	-0.00039	0.12628	0.00161	0.00061	9.42862	0.00114	-0.00266	-0.00039
Mean	7.84880	-0.00070	0.12466	-0.00096	0.00074	9.39033	-0.00076	-0.00256	-0.00025
%RSD	0.06279	63.30089	1.83266	378.60607	24.24012	0.57667	353.80740	6.03837	82.40343

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.20126	-0.00229	0.11627	-0.01999	-0.00073	0.00156	-0.01701	-0.00028	0.01978
#2	3.20793	-0.00014	0.11667	-0.01538	-0.00061	0.00348	-0.00951	-0.00007	0.01832
Mean	3.20459	-0.00122	0.11647	-0.01768	-0.00067	0.00252	-0.01326	-0.00017	0.01905
%RSD	0.14711	124.71710	0.23994	18.41385	13.03331	53.74308	40.00182	86.27023	5.39442

	Zr ppm	Pb calc	SeUNDGREEN calc
#1	0.00096	-0.00060	-0.00088
#2	0.00092	0.00094	-0.00115
<b>Mean</b>	<b>0.00094</b>	<b>0.00017</b>	<b>-0.00102</b>
%RSD	2.99304	636.34400	18.52209

Method : Paragon File : 111010A  
**SampleId1 : 1109381-1D** **SampleId2 :**  
**Analysis commenced : 10/10/2011 12:58:46**  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:39

[SAMPLE]

Position : TUBE9

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00050	0.06950	0.00341	0.01888	0.04168	0.00013	-0.00304	45.87351	-0.00078
#2	0.00008	0.07338	-0.00491	0.01922	0.04154	0.00010	-0.00206	45.77468	-0.00008
<b>Mean</b>	<b>-0.00021</b>	<b>0.07144</b>	<b>-0.00075</b>	<b>0.01905</b>	<b>0.04161</b>	<b>0.00011</b>	<b>-0.00255</b>	<b>45.82409</b>	<b>-0.00043</b>
%RSD	192.09713	3.84278	783.16869	1.27931	0.23847	16.46378	27.12343	0.15249	114.01154

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00108	-0.00070	0.00155	0.10859	1.43037	0.01193	11.48848	0.03222	0.00473
#2	-0.00041	0.00010	0.00188	0.10859	1.43083	0.01191	11.45866	0.03222	0.00412
<b>Mean</b>	<b>-0.00074</b>	<b>-0.00030</b>	<b>0.00172</b>	<b>0.10859</b>	<b>1.43060</b>	<b>0.01192</b>	<b>11.47357</b>	<b>0.03222</b>	<b>0.00443</b>
%RSD	63.44523	186.55501	13.45111	0.00000	0.02238	0.10285	0.18381	0.00000	9.74633

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	7.77570	-0.00125	0.13390	-0.00078	0.00083	9.32554	-0.00019	-0.00020	0.00033
#2	7.75581	0.00012	0.12651	0.00258	-0.00177	9.24602	-0.00009	-0.00052	0.00019
<b>Mean</b>	<b>7.76576</b>	<b>-0.00056</b>	<b>0.13020</b>	<b>0.00090</b>	<b>-0.00047</b>	<b>9.28578</b>	<b>-0.00014</b>	<b>-0.00036</b>	<b>0.00026</b>
%RSD	0.18115	171.57217	4.01088	263.02852	390.92737	0.60552	48.82712	62.15041	39.35416

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.18156	0.00415	0.11601	-0.01462	-0.00057	0.00721	-0.01471	-0.00063	0.01687
#2	3.17517	0.00307	0.11562	-0.02323	-0.00077	0.00577	0.00491	0.00015	0.01803
<b>Mean</b>	<b>3.17837</b>	<b>0.00361</b>	<b>0.11582</b>	<b>-0.01893</b>	<b>-0.00067</b>	<b>0.00649</b>	<b>-0.00490</b>	<b>-0.00024</b>	<b>0.01745</b>
%RSD	0.14202	21.00209	0.23540	32.16482	20.98222	15.74746	283.10973	226.90903	4.71081

	Zr ppm	Pb calc	Se calc
#1	0.00060	0.00029	0.00016
#2	0.00160	-0.00032	-0.00005
<b>Mean</b>	<b>0.00110</b>	<b>-0.00001</b>	<b>0.00005</b>
%RSD	64.54737	3534.93809	271.26862

Method : Paragon File : 111010A

Printed : 10/11/2011 11:37:39

SampleId1 : 1109381-1L 5X      SampleId2 :  
 Analysis commenced : 10/10/2011 13:00:35  
 Dilution ratio : 1.00000 to 1.00000      Tray :

[SAMPLE]  
 Position : TUBE10

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00040	0.00567	0.00530	0.00034	0.00766	0.00007	-0.00370	9.09880	-0.00055
#2	-0.00010	0.00694	-0.00056	0.00047	0.00766	0.00005	-0.00192	9.12437	-0.00028
Mean	-0.00025	0.00630	0.00237	0.00040	0.00766	0.00006	-0.00281	9.11159	-0.00042
%RSD	82.51084	14.27484	174.98536	24.08616	0.00000	27.06792	44.97956	0.19843	44.72473
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00076	-0.00089	-0.00153	0.01222	0.18071	0.00503	2.26340	0.00599	-0.00151
#2	-0.00070	-0.00046	-0.00093	0.01253	0.19065	0.00504	2.26340	0.00615	-0.00062
Mean	-0.00073	-0.00068	-0.00123	0.01237	0.18568	0.00503	2.26340	0.00607	-0.00106
%RSD	5.95164	45.07171	34.47432	1.77995	3.78593	0.08118	0.00000	1.81710	58.53881
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	1.37684	-0.00050	0.02130	-0.00093	0.00163	1.80651	-0.00269	-0.00019	-0.00361
#2	1.37425	-0.00074	0.02915	0.00086	-0.00091	1.79775	-0.00024	0.00452	-0.00448
Mean	1.37554	-0.00062	0.02522	-0.00003	0.00036	1.80213	-0.00146	0.00216	-0.00404
%RSD	0.13291	26.99114	21.98337	3857.65269	499.75168	0.34370	118.37801	153.97972	15.24214
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	0.62112	0.00415	0.02080	-0.00452	-0.00139	0.00116	-0.01349	-0.00083	0.13113
#2	0.62305	0.00093	0.02076	-0.00129	-0.00172	0.00162	-0.01234	-0.00005	0.13084
Mean	0.62209	0.00254	0.02078	-0.00291	-0.00155	0.00139	-0.01291	-0.00044	0.13099
%RSD	0.21960	89.60655	0.16358	78.68998	15.05435	23.17502	6.31834	125.62439	0.15701
	Zr ppm	Pb calc	Se calc						
#1	0.00060	0.00078	-0.00247						
#2	0.00057	-0.00032	-0.00148						
Mean	0.00059	0.00023	-0.00198						
%RSD	3.95196	339.61151	35.26700						

Method : Paragon      File : 111010A  
 SampleId1 : CCV      SampleId2 :  
 Analysis commenced : 10/10/2011 13:04:24  
 Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:37:39  
 [CV]  
 Position : STD6

Final concentrations

Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
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#1	0.19538	52.88015	0.51234	1.01144	0.99373	0.48813	0.53827	51.99774	0.50865
#2	0.19512	52.83370	0.51177	1.01884	0.99654	0.48728	0.53519	51.74338	0.50678
Mean	0.19525	52.85693	0.51206	1.01514	0.99513	0.48770	0.53673	51.87056	0.50772
%RSD	0.09298	0.06215	0.07878	0.51566	0.19961	0.12318	0.40488	0.34675	0.26056

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.48830	0.97200	1.02189	20.66215	49.57100	0.49539	51.65550	0.97601	0.99087
#2	0.48600	0.96793	1.02402	20.62279	49.64981	0.49648	51.62464	0.97490	0.98916
Mean	0.48715	0.96997	1.02295	20.64247	49.61041	0.49593	51.64007	0.97545	0.99002
%RSD	0.33510	0.29708	0.14706	0.13484	0.11233	0.15462	0.04226	0.08035	0.12190

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	49.37109	0.99512	5.27189	0.99948	0.98210	5.22951	0.50285	1.02195	1.00519
#2	49.34868	0.99563	5.25953	1.00285	0.98924	5.20019	0.50054	1.01767	1.00658
Mean	49.35989	0.99537	5.26571	1.00117	0.98567	5.21485	0.50169	1.01981	1.00588
%RSD	0.03210	0.03603	0.16603	0.23857	0.51244	0.39748	0.32558	0.29653	0.09757

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.92594	1.05691	0.49677	0.35201	0.47853	0.52839	4.85343	0.48545	0.99395
#2	4.92039	1.06265	0.49748	0.35986	0.47939	0.52730	4.87313	0.48417	0.98956
Mean	4.92316	1.05978	0.49712	0.35593	0.47896	0.52784	4.86328	0.48481	0.99176
%RSD	0.07962	0.38279	0.10113	1.55935	0.12713	0.14670	0.28645	0.18700	0.31284

	Zr	Pb	Se
	ppm	calc	calc
#1	0.99765	0.98789	1.01077
#2	0.99688	0.99377	1.01027
Mean	0.99726	0.99083	1.01052
%RSD	0.05429	0.42029	0.03487

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:39

SampleId1 : CCB

SampleId2 :

[CB]

Analysis commenced : 10/10/2011 13:06:19

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD2

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00045	0.05154	-0.00141	-0.00097	-0.00041	0.00045	-0.00322	0.02564	-0.00047
#2	-0.00036	0.07166	0.00313	-0.00187	0.00005	0.00062	-0.00484	0.05450	0.00005
Mean	-0.00040	0.06160	0.00086	-0.00142	-0.00018	0.00054	-0.00403	0.04007	-0.00021
%RSD	16.62916	23.09314	374.87597	44.56145	180.90823	21.73631	28.45429	50.93095	175.69455

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00095	-0.00024	-0.00178	0.00983	-0.05964	0.00384	0.01375	-0.00025	-0.00103

#2	-0.00095	0.00021	-0.00118	0.01907	-0.03954	0.00398	0.03434	0.00030	-0.00049
Mean	-0.00095	-0.00001	-0.00148	0.01445	-0.04959	0.00391	0.02405	0.00003	-0.00076
%RSD	0.01768	2183.67466	28.45765	45.21755	28.66065	2.51032	60.54008	1493.13331	50.49391

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.04489	-0.00169	0.00055	-0.00064	0.00058	-0.00773	-0.00202	0.00059	0.00053
#2	-0.02743	-0.00030	0.00262	-0.00115	0.00128	-0.00773	-0.00158	-0.00344	-0.00186
Mean	-0.03616	-0.00099	0.00158	-0.00090	0.00093	-0.00773	-0.00180	-0.00143	-0.00067
%RSD	34.13440	99.32998	92.62236	40.01126	53.62500	0.00000	17.45895	200.10333	254.55983

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01646	0.00057	-0.00274	-0.00097	-0.00148	0.00152	-0.01522	-0.00040	0.00059
#2	-0.01336	-0.00122	-0.00249	-0.00148	-0.00129	0.00581	-0.01234	-0.00008	0.00001
Mean	-0.01491	-0.00032	-0.00262	-0.00122	-0.00138	0.00366	-0.01378	-0.00024	0.00030
%RSD	14.72008	393.20701	6.74714	29.09809	9.71643	82.66273	14.77250	93.11861	135.36607

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00156	0.00017	0.00055
#2	0.00192	0.00047	-0.00239
Mean	0.00174	0.00032	-0.00092
%RSD	14.49540	66.31497	226.42043

Method : Paragon File : 111010A  
SampleId1 : 1109381-1MS SampleId2 :  
Analysis commenced : 10/10/2011 13:08:13  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:40  
[SAMPLE]  
Position : TUBE11

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00085	2.12609	1.97366	0.51833	1.97153	0.04879	-0.00427	46.28087	0.04889
#2	-0.00011	2.12824	1.99240	0.51812	1.98368	0.04899	-0.00345	46.25948	0.04904
Mean	-0.00048	2.12717	1.98303	0.51822	1.97761	0.04889	-0.00386	46.27018	0.04896
%RSD	108.10210	0.07173	0.66797	0.02827	0.43435	0.29561	15.04729	0.03268	0.21177

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.47001	0.18868	0.25060	1.07862	1.43649	0.01203	11.50008	0.50742	0.95790
#2	0.47069	0.18882	0.25274	1.08082	1.43377	0.01205	11.53529	0.50844	0.96097
Mean	0.47035	0.18875	0.25167	1.07972	1.43513	0.01204	11.51769	0.50793	0.95944
%RSD	0.10257	0.04990	0.60034	0.14401	0.13388	0.11879	0.21617	0.14229	0.22637

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	7.80095	0.48540	10.29670	0.47899	0.48344	19.27734	0.48685	2.00371	1.98469
#2	7.82001	0.48957	10.29573	0.48479	0.47704	19.35478	0.48599	2.02824	1.98677



<b>Mean</b>	<b>7.81048</b>	<b>0.48748</b>	<b>10.29621</b>	<b>0.48189</b>	<b>0.48024</b>	<b>19.31606</b>	<b>0.48642</b>	<b>2.01597</b>	<b>1.98573</b>
<b>%RSD</b>	0.17261	0.60469	0.00671	0.85133	0.94293	0.28350	0.12586	0.86027	0.07409
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	5.21167	0.51157	0.60264	-0.01198	0.46106	2.00463	-0.01710	0.47649	0.49777
#2	5.22355	0.51766	0.60555	-0.01028	0.46275	2.00237	-0.01364	0.47812	0.50244
<b>Mean</b>	<b>5.21761</b>	<b>0.51461</b>	<b>0.60410</b>	<b>-0.01113</b>	<b>0.46191</b>	<b>2.00350</b>	<b>-0.01537</b>	<b>0.47730</b>	<b>0.50010</b>
<b>%RSD</b>	0.16110	0.83601	0.34072	10.78842	0.25856	0.07983	15.92007	0.24132	0.65961
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00403	0.48196	1.99102						
#2	0.00306	0.47962	2.00058						
<b>Mean</b>	<b>0.00354</b>	<b>0.48079</b>	<b>1.99580</b>						
<b>%RSD</b>	19.38239	0.34407	0.33853						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:40

SampleId1 : 1109381-1MSD

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 13:10:02

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE12

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00054	2.14925	2.02176	0.52737	2.01267	0.04971	0.00079	46.78239	0.04913
#2	-0.00030	2.16530	2.02156	0.53158	2.02169	0.04982	-0.00180	46.99116	0.04941
<b>Mean</b>	<b>-0.00042</b>	<b>2.15727</b>	<b>2.02166</b>	<b>0.52948</b>	<b>2.01718</b>	<b>0.04976</b>	<b>-0.00050</b>	<b>46.88678</b>	<b>0.04927</b>
<b>%RSD</b>	40.22110	0.52615	0.00676	0.56260	0.31607	0.15196	363.98451	0.31484	0.39656
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.47765	0.19128	0.25702	1.08699	1.44872	0.01215	11.65543	0.51465	0.97135
#2	0.47851	0.19309	0.25770	1.09244	1.45936	0.01220	11.72586	0.51662	0.97988
<b>Mean</b>	<b>0.47808</b>	<b>0.19218</b>	<b>0.25736</b>	<b>1.08972</b>	<b>1.45404</b>	<b>0.01218</b>	<b>11.69064</b>	<b>0.51563</b>	<b>0.97561</b>
<b>%RSD</b>	0.12741	0.66442	0.18650	0.35335	0.51756	0.25166	0.42599	0.26958	0.61846
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	7.94230	0.49716	10.63994	0.48840	0.48375	19.76892	0.49496	2.04101	2.01701
#2	7.98317	0.49850	10.68329	0.49388	0.48134	19.81660	0.49757	2.06338	2.01077
<b>Mean</b>	<b>7.96273</b>	<b>0.49783</b>	<b>10.66161</b>	<b>0.49114</b>	<b>0.48254</b>	<b>19.79276</b>	<b>0.49626</b>	<b>2.05219</b>	<b>2.01389</b>
<b>%RSD</b>	0.36291	0.19033	0.28749	0.78875	0.35233	0.17035	0.37246	0.77075	0.21915
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	5.28733	0.51765	0.61440	-0.00879	0.46906	2.02836	-0.02172	0.48346	0.50710
#2	5.31393	0.51979	0.61690	-0.01822	0.47023	2.03507	-0.01423	0.48545	0.50798
<b>Mean</b>	<b>5.30063</b>	<b>0.51872</b>	<b>0.61565</b>	<b>-0.01350</b>	<b>0.46965</b>	<b>2.03172</b>	<b>-0.01797</b>	<b>0.48446</b>	<b>0.50754</b>

%RSD	0.35480	0.29264	0.28730	49.35105	0.17577	0.23348	29.49554	0.28953	0.12187
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00093	0.48530	2.02500						
#2	0.00102	0.48552	2.02829						
<b>Mean</b>	<b>0.00098</b>	<b>0.48541</b>	<b>2.02665</b>						
%RSD	7.07106	0.03214	0.11464						

Method : Paragon  
**SampleId1 : 1109382-1**  
**Analysis commenced : 10/10/2011 13:11:52**  
Dilution ratio : 1.00000 to 1.00000

File : 111010A

Printed : 10/11/2011 11:37:40

[SAMPLE]

Tray :

Position : TUBE13

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00039	0.02758	-0.00028	0.00943	0.02835	0.00036	-0.00939	55.63780	-0.00072
#2	-0.00010	0.02086	-0.00397	0.00874	0.02849	0.00032	-0.00289	55.63190	-0.00021
<b>Mean</b>	<b>-0.00024</b>	<b>0.02422</b>	<b>-0.00212</b>	<b>0.00909</b>	<b>0.02842</b>	<b>0.00034</b>	<b>-0.00614</b>	<b>55.63485</b>	<b>-0.00046</b>
%RSD	85.78016	19.61918	122.85811	5.36218	0.34908	6.64305	74.79649	0.00751	77.29800

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00079	-0.00070	-0.00229	0.18467	0.98900	0.01511	4.35554	0.26570	-0.00049
#2	-0.00049	-0.00027	-0.00135	0.18508	0.98810	0.01518	4.36462	0.26664	-0.00096
<b>Mean</b>	<b>-0.00064</b>	<b>-0.00048</b>	<b>-0.00182</b>	<b>0.18488</b>	<b>0.98855</b>	<b>0.01514</b>	<b>4.36008</b>	<b>0.26617</b>	<b>-0.00073</b>
%RSD	33.56886	63.32186	36.62660	0.15905	0.06474	0.32373	0.14725	0.24972	46.24618

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	39.57072	-0.00238	0.00285	-0.00570	-0.00020	33.19789	-0.00290	-0.00638	0.00180
#2	39.71489	-0.00181	0.00516	0.00000	-0.00108	33.33400	-0.00314	-0.00862	-0.00118
<b>Mean</b>	<b>39.64280</b>	<b>-0.00209</b>	<b>0.00401</b>	<b>-0.00285</b>	<b>-0.00064</b>	<b>33.26595</b>	<b>-0.00302</b>	<b>-0.00750</b>	<b>0.00031</b>
%RSD	0.25716	19.06802	40.70688	141.29826	97.38247	0.28931	5.40812	21.13093	671.51187

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.13161	0.00021	1.17928	-0.00229	-0.00132	0.00346	-0.02111	-0.00086	0.00321
#2	4.15307	-0.00014	1.18311	-0.00553	-0.00140	-0.00127	-0.02226	-0.00019	0.00292
<b>Mean</b>	<b>4.14234</b>	<b>0.00004</b>	<b>1.18119</b>	<b>-0.00391</b>	<b>-0.00136</b>	<b>0.00109</b>	<b>-0.02169</b>	<b>-0.00053</b>	<b>0.00306</b>
%RSD	0.36628	702.35795	0.22918	58.56339	3.87147	306.43290	3.76390	89.95620	6.70585

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	-0.00027	-0.00203	-0.00092
#2	-0.00006	-0.00072	-0.00366
<b>Mean</b>	<b>-0.00017</b>	<b>-0.00138</b>	<b>-0.00229</b>
%RSD	91.51616	67.17684	84.42651

ted: 10/11/2011 11:38:21 User: MIKE LUNDGREEN  
 Method : Paragon File : 111010A  
 SampleId1 : 1109382-2 SampleId2 :  
 Analysis commenced : 10/10/2011 13:13:41  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:40  
 [SAMPLE]  
 Position : TUBE14

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00010	0.99209	0.00076	0.01212	0.31824	0.00033	-0.00140	5.67267	-0.00019
#2	-0.00034	0.99913	-0.00085	0.01157	0.31951	0.00030	-0.00075	5.68998	-0.00004
Mean	-0.00022	0.99561	-0.00004	0.01185	0.31888	0.00032	-0.00107	5.68133	-0.00012
%RSD	78.51137	0.49994	2693.72152	3.29140	0.28117	7.32780	42.85985	0.21543	89.98177
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00029	0.00132	0.00336	1.01099	0.76483	0.01475	0.22501	0.05158	-0.00056
#2	-0.00017	0.00100	0.00361	1.01434	0.76392	0.01483	0.23407	0.05173	-0.00035
Mean	-0.00023	0.00116	0.00348	1.01267	0.76437	0.01479	0.22954	0.05165	-0.00045
%RSD	38.22582	19.60926	5.24298	0.23385	0.08369	0.38684	2.79104	0.21377	31.64720
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	141.48577	0.00101	-0.01583	0.00053	0.00195	0.45276	0.00041	0.00025	-0.00377
#2	142.03952	0.00080	-0.01698	-0.00276	0.00026	0.44693	0.00030	0.00114	-0.00115
Mean	141.76265	0.00091	-0.01640	-0.00111	0.00110	0.44984	0.00036	0.00069	-0.00246
%RSD	0.27621	16.20648	4.97034	208.45042	108.57837	0.91650	20.97329	91.33165	75.16510
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	5.46530	0.00056	0.13505	0.00226	0.01062	-0.00279	-0.02052	0.00092	0.01542
#2	5.49708	-0.00194	0.13567	-0.00042	0.01066	0.00340	-0.02283	0.00089	0.01716
Mean	5.48119	-0.00069	0.13536	0.00092	0.01064	0.00031	-0.02167	0.00090	0.01629
%RSD	0.40990	255.35636	0.32244	206.21749	0.27458	1412.69992	7.53804	2.71039	7.57050
	Zr ppm	Pb calc	Se calc						
#1	0.00019	0.00147	-0.00243						
#2	0.00019	-0.00075	-0.00039						
Mean	0.00019	0.00036	-0.00141						
%RSD	1.15610	432.02751	102.37202						

Method : Paragon File : 111010A  
 SampleId1 : 1109382-4 SampleId2 :  
 Analysis commenced : 10/10/2011 13:15:29  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:40  
 [SAMPLE]  
 Position : TUBE15

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00088	0.00867	-0.00510	0.01881	0.02947	0.00027	-0.00290	53.05192	-0.00058
#2	0.00000	0.00976	-0.00359	0.01722	0.02926	0.00019	0.00019	53.01633	-0.00023
Mean	-0.00044	0.00921	-0.00434	0.01802	0.02937	0.00023	-0.00135	53.03413	-0.00040
%RSD	140.88001	8.35207	24.62321	6.22256	0.50674	22.64789	161.18729	0.04746	61.17962

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00115	-0.00121	-0.00237	-0.00803	0.91118	0.01491	4.26021	0.25184	-0.00103
#2	-0.00091	-0.00067	-0.00238	-0.00751	0.91457	0.01479	4.21935	0.25153	-0.00090
Mean	-0.00103	-0.00094	-0.00237	-0.00777	0.91287	0.01485	4.23978	0.25168	-0.00096
%RSD	16.59096	40.14483	0.21352	4.72552	0.26285	0.55036	0.68140	0.08801	9.95710

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	41.32472	-0.00193	-0.00960	-0.00371	0.00132	31.89834	-0.00268	-0.00648	-0.00107
#2	40.82438	-0.00232	-0.00799	0.00121	0.00128	31.69299	-0.00246	-0.00210	-0.00245
Mean	41.07455	-0.00212	-0.00879	-0.00125	0.00130	31.79566	-0.00257	-0.00429	-0.00176
%RSD	0.86135	12.86396	12.98120	278.71451	2.35690	0.45667	5.99496	72.22554	55.47139

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.09453	0.00272	1.14515	-0.00714	-0.00209	0.00183	-0.02559	-0.00111	0.00118
#2	4.06077	-0.00264	1.13604	-0.00507	-0.00191	0.00484	-0.01636	-0.00072	0.00001
Mean	4.07765	0.00004	1.14060	-0.00611	-0.00200	0.00333	-0.02098	-0.00092	0.00059
%RSD	0.58543	10321.27977	0.56445	23.95681	6.43139	63.87530	31.11896	29.92974	138.32748

	Zr ppm	Pb calc	Se calc
#1	0.00002	-0.00035	-0.00287
#2	0.00000	0.00126	-0.00233
Mean	0.00001	0.00045	-0.00260
%RSD	153.90056	250.59667	14.60266

Method : Paragon File : 111010A  
SampleId1 : 1109382-5 SampleId2 :  
Analysis commenced : 10/10/2011 13:17:18  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:40  
[SAMPLE]

Position : TUBE16

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00035	0.09124	0.00123	0.01178	0.27564	0.00023	-0.00354	5.23434	-0.00059
#2	-0.00010	0.09252	0.00511	0.01192	0.27518	0.00017	-0.00337	5.24325	-0.00044
Mean	-0.00023	0.09188	0.00317	0.01185	0.27541	0.00020	-0.00345	5.23879	-0.00052
%RSD	76.45714	0.98889	86.40382	0.82285	0.11748	22.99599	3.34996	0.12027	19.87258

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00093	-0.00059	-0.00110	0.08896	0.52355	0.01374	0.09652	0.03916	0.00094
#2	-0.00008	-0.00057	-0.00058	0.09010	0.52966	0.01375	0.10311	0.03916	-0.00090
<b>Mean</b>	<b>-0.00051</b>	<b>-0.00058</b>	<b>-0.00084</b>	<b>0.08953</b>	<b>0.52661</b>	<b>0.01374</b>	<b>0.09982</b>	<b>0.03916</b>	<b>0.00002</b>
%RSD	118.12573	3.20597	43.08232	0.90248	0.81962	0.07433	4.66749	0.00000	6427.71563

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	132.59248	-0.00041	-0.02251	-0.00065	0.00114	0.42361	-0.00189	-0.00233	-0.00018
#2	132.32671	-0.00140	-0.03404	0.00249	0.00001	0.42944	-0.00291	0.00148	0.00077
<b>Mean</b>	<b>132.45960</b>	<b>-0.00091</b>	<b>-0.02828</b>	<b>0.00092</b>	<b>0.00058</b>	<b>0.42652</b>	<b>-0.00240</b>	<b>-0.00043</b>	<b>0.00029</b>
%RSD	0.14187	76.61163	28.82877	241.55595	138.32933	0.96658	29.95111	633.73098	227.04923

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.18520	-0.00443	0.12308	-0.00059	-0.00014	0.00420	-0.01412	-0.00039	0.00641
#2	4.18292	0.00200	0.12317	0.00024	-0.00031	0.00338	-0.01297	0.00011	0.00553
<b>Mean</b>	<b>4.18406</b>	<b>-0.00122</b>	<b>0.12312</b>	<b>-0.00018</b>	<b>-0.00023</b>	<b>0.00379</b>	<b>-0.01354</b>	<b>-0.00014</b>	<b>0.00597</b>
%RSD	0.03842	374.03297	0.05537	329.52742	54.23270	15.25416	6.02166	250.07040	10.32558

	Zr ppm	Pb calc	Se calc
#1	0.00018	0.00055	-0.00090
#2	0.00036	0.00084	0.00100
<b>Mean</b>	<b>0.00027</b>	<b>0.00069</b>	<b>0.00005</b>
%RSD	47.44578	29.80708	2458.16681

Method : Paragon File : 111010A  
SampleId1 : 1110028-10 SampleId2 :  
Analysis commenced : 10/10/2011 13:19:06  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:41  
[SAMPLE]

Position : TUBE17

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00004	0.00735	-0.00122	0.00613	0.25769	0.00017	-0.00403	55.60096	-0.00007
#2	-0.00019	0.00593	-0.00037	0.00482	0.25850	0.00011	-0.00712	55.22846	-0.00041
<b>Mean</b>	<b>-0.00007</b>	<b>0.00664</b>	<b>-0.00080</b>	<b>0.00547</b>	<b>0.25810</b>	<b>0.00014</b>	<b>-0.00557</b>	<b>55.41471</b>	<b>-0.00024</b>
%RSD	226.60688	15.08210	75.34600	16.92694	0.22174	27.28458	39.20062	0.47532	97.75735

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00113	-0.00070	-0.00170	0.00620	0.71371	0.00477	9.96673	-0.00056	-0.00178
#2	-0.00095	-0.00088	-0.00177	0.00578	0.70874	0.00475	9.95266	-0.00072	-0.00123
<b>Mean</b>	<b>-0.00104</b>	<b>-0.00079</b>	<b>-0.00173</b>	<b>0.00599</b>	<b>0.71123</b>	<b>0.00476</b>	<b>9.95969</b>	<b>-0.00064</b>	<b>-0.00151</b>
%RSD	12.40396	15.86996	2.83432	4.90339	0.49464	0.38626	0.09992	17.31292	25.47773

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
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#1	10.79528	-0.00146	0.00147	-0.00192	0.00181	7.20166	0.00009	0.00452	-0.00325
#2	10.78109	-0.00193	-0.00545	-0.00483	0.00274	7.23104	-0.00346	-0.00245	-0.00310
<b>Mean</b>	<b>10.78819</b>	<b>-0.00169</b>	<b>-0.00199</b>	<b>-0.00338</b>	<b>0.00227</b>	<b>7.21635</b>	<b>-0.00169</b>	<b>0.00103</b>	<b>-0.00317</b>
%RSD	0.09302	19.86313	245.83593	61.04097	29.12581	0.28790	148.78771	476.47426	3.24262

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.18443	-0.00050	0.35396	-0.01030	-0.00202	0.00280	-0.01291	-0.00044	0.00321
#2	4.17648	-0.00157	0.35482	-0.01233	-0.00205	-0.00067	-0.03368	-0.00061	0.00321
<b>Mean</b>	<b>4.18046</b>	<b>-0.00104</b>	<b>0.35439</b>	<b>-0.01131</b>	<b>-0.00203</b>	<b>0.00106</b>	<b>-0.02329</b>	<b>-0.00053</b>	<b>0.00321</b>
%RSD	0.13440	73.21807	0.17229	12.70749	1.15032	231.35863	63.05367	23.70858	0.00000

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00040	0.00057	-0.00066
#2	0.00042	0.00022	-0.00288
<b>Mean</b>	<b>0.00041</b>	<b>0.00039</b>	<b>-0.00177</b>
%RSD	2.61086	62.12493	88.65468

Method : Paragon File : 111010A  
SampleId1 : 1110028-11 SampleId2 :  
Analysis commenced : 10/10/2011 13:20:55  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:41  
[SAMPLE]  
Position : TUBE18

# Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00087	0.00506	0.00407	0.00599	0.07670	0.00021	0.00133	14.98157	-0.00020
#2	-0.00005	0.00847	0.00095	0.00495	0.07687	0.00018	-0.00143	14.90527	0.00003
<b>Mean</b>	<b>0.00041</b>	<b>0.00677</b>	<b>0.00251</b>	<b>0.00547</b>	<b>0.07679</b>	<b>0.00019</b>	<b>-0.00005</b>	<b>14.94342</b>	<b>-0.00008</b>
%RSD	158.97628	35.61802	87.87743	13.36338	0.16161	11.13803	4034.53261	0.36107	194.71423

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00054	-0.00025	-0.00025	-0.00522	0.55973	0.00814	1.27669	0.00100	-0.00212
#2	-0.00030	-0.00119	-0.00127	-0.00605	0.54865	0.00810	1.26762	0.00085	-0.00069
<b>Mean</b>	<b>-0.00042</b>	<b>-0.00072</b>	<b>-0.00076</b>	<b>-0.00564</b>	<b>0.55419</b>	<b>0.00812</b>	<b>1.27216</b>	<b>0.00092</b>	<b>-0.00140</b>
%RSD	41.02907	92.37279	94.93526	10.41458	1.41350	0.30185	0.50387	11.95304	71.72476

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	68.02415	-0.00119	-0.01098	0.00438	0.00007	21.27812	-0.00081	0.00206	-0.00165
#2	67.76549	-0.00181	-0.00360	-0.00199	0.00082	21.31394	-0.00268	0.00552	-0.00761
<b>Mean</b>	<b>67.89482</b>	<b>-0.00150</b>	<b>-0.00729</b>	<b>0.00119</b>	<b>0.00045</b>	<b>21.29603</b>	<b>-0.00174</b>	<b>0.00379</b>	<b>-0.00463</b>
%RSD	0.26939	29.42874	71.53868	378.19834	119.48299	0.11894	75.78209	64.62148	90.99975

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.05040	0.00236	0.33275	-0.00256	-0.00184	-0.00021	-0.00482	0.00019	0.00263

#2	3.04343	-0.00479	0.33307	-0.00529	-0.00197	0.00579	-0.01752	-0.00069	0.00234
<b>Mean</b>	<b>3.04692</b>	<b>-0.00121</b>	<b>0.33291</b>	<b>-0.00393</b>	<b>-0.00190</b>	<b>0.00279</b>	<b>-0.01117</b>	<b>-0.00025</b>	<b>0.00248</b>
%RSD	0.16178	416.24006	0.06797	49.09704	4.60393	151.92961	80.36082	253.19635	8.27542

	Zr ppm	Pb calc	Se calc
#1	0.00056	0.00150	-0.00042
#2	0.00025	-0.00011	-0.00324
<b>Mean</b>	<b>0.00040</b>	<b>0.00069</b>	<b>-0.00183</b>
%RSD	54.61277	164.83288	109.24147

Method : Paragon      File : 111010A  
**SampleId1 : 1110028-12      SampleId2 :**  
**Analysis commenced : 10/10/2011 13:22:44**  
Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:37:41

[SAMPLE]

Position : TUBE19

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00005	0.01669	-0.00397	0.03363	0.38583	0.00020	-0.00257	2.16440	-0.00059
#2	0.00000	0.01560	-0.00236	0.03335	0.38851	0.00021	-0.00760	2.15474	-0.00082
<b>Mean</b>	<b>0.00003</b>	<b>0.01614</b>	<b>-0.00316</b>	<b>0.03349</b>	<b>0.38717</b>	<b>0.00021</b>	<b>-0.00508</b>	<b>2.15957</b>	<b>-0.00070</b>
%RSD	141.06578	4.74551	35.94008	0.58217	0.48935	2.37540	69.92868	0.31603	23.50110

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00071	-0.00067	-0.00212	0.92709	3.45303	0.03905	0.55491	0.02597	-0.00239
#2	-0.00035	-0.00105	-0.00195	0.92970	3.47871	0.03938	0.55532	0.02582	-0.00184
<b>Mean</b>	<b>-0.00053</b>	<b>-0.00086</b>	<b>-0.00203</b>	<b>0.92839</b>	<b>3.46587</b>	<b>0.03921</b>	<b>0.55512</b>	<b>0.02589</b>	<b>-0.00212</b>
%RSD	48.97572	31.27767	5.77679	0.19914	0.52388	0.59386	0.05247	0.42627	18.12906

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	326.62590	-0.00116	0.05129	-0.00349	0.00006	0.06220	-0.00236	0.00126	-0.00379
#2	323.45739	-0.00039	0.05360	0.00052	-0.00051	0.06803	-0.00047	-0.00210	-0.00095
<b>Mean</b>	<b>325.04165</b>	<b>-0.00077</b>	<b>0.05244</b>	<b>-0.00148</b>	<b>-0.00022</b>	<b>0.06512</b>	<b>-0.00141</b>	<b>-0.00042</b>	<b>-0.00237</b>
%RSD	0.68929	70.82457	3.11041	190.87919	182.13334	6.32869	94.92738	569.68301	84.57669

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	6.07277	-0.00086	0.28148	-0.00451	-0.00181	0.00081	-0.02277	-0.00100	0.00263
#2	6.11538	-0.00193	0.28371	0.00000	-0.00164	0.00373	-0.01642	-0.00047	0.00263
<b>Mean</b>	<b>6.09407</b>	<b>-0.00139</b>	<b>0.28259</b>	<b>-0.00226</b>	<b>-0.00173</b>	<b>0.00227</b>	<b>-0.01959</b>	<b>-0.00074</b>	<b>0.00263</b>
%RSD	0.49440	54.42828	0.55970	141.24579	6.77042	90.79842	22.89777	50.91044	0.00000

	Zr ppm	Pb calc	Se calc
#1	-0.00004	-0.00112	-0.00211
#2	-0.00044	-0.00017	-0.00133

Mean      -0.00024      -0.00064      -0.00172UNDGREEN  
%RSD      118.81749      105.03366      31.76260

Method : Paragon      File : 111010A  
SampleId1 : 1110028-13      SampleId2 :  
Analysis commenced : 10/10/2011 13:24:32  
Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:37:41

[SAMPLE]

Position : TUBE20

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00072	0.01701	0.00123	0.19684	0.04340	0.00023	0.00003	3.03287	-0.00083
#2	-0.00078	0.00998	0.00142	0.19484	0.04326	0.00021	-0.00354	2.98951	-0.00066
Mean	-0.00075	0.01349	0.00133	0.19584	0.04333	0.00022	-0.00176	3.01119	-0.00074
%RSD	4.91816	36.84464	10.06299	0.72222	0.22902	6.61165	143.48304	1.01819	16.19264

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00113	-0.00099	-0.00211	2.52788	0.50999	0.06259	0.01993	0.03542	-0.00205
#2	-0.00095	-0.00102	-0.00212	2.50617	0.49733	0.06250	0.01211	0.03510	-0.00212
Mean	-0.00104	-0.00101	-0.00211	2.51702	0.50366	0.06254	0.01602	0.03526	-0.00208
%RSD	12.40666	1.98130	0.06032	0.60995	1.77733	0.09797	34.53732	0.62616	2.30304

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	197.09541	0.00000	0.00101	-0.00097	0.00232	0.03889	-0.00425	-0.00274	0.00279
#2	195.78099	-0.00080	-0.01329	-0.00592	0.00285	0.04180	-0.00525	-0.00778	0.00053
Mean	196.43820	-0.00040	-0.00614	-0.00345	0.00259	0.04035	-0.00475	-0.00526	0.00166
%RSD	0.47315	141.86101	164.63525	101.65003	14.40809	5.10672	14.90655	67.74999	96.25225

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	9.68229	-0.00050	0.24889	0.00076	-0.00159	-0.00289	-0.02617	-0.00126	0.01309
#2	9.62071	-0.00622	0.24780	-0.00744	-0.00212	-0.00053	-0.02384	-0.00140	0.01280
Mean	9.65150	-0.00336	0.24835	-0.00334	-0.00185	-0.00171	-0.02500	-0.00133	0.01295
%RSD	0.45110	120.37469	0.30851	173.65032	19.85358	97.59960	6.56879	7.74052	1.58748

	Zr ppm	Pb calc	Se calc
#1	-0.00153	0.00123	0.00095
#2	-0.00114	-0.00007	-0.00224
Mean	-0.00134	0.00058	-0.00065
%RSD	20.97730	158.78239	348.76149

Method : Paragon      File : 111010A  
SampleId1 : CCV      SampleId2 :  
Analysis commenced : 10/10/2011 13:28:21  
Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:37:41

[CV]

Position : STD6



Final concentrations38:21 User: MIKE LUNDGREEN

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19340	52.99156	0.50854	1.01926	0.99689	0.48339	0.53018	51.58476	0.51114
#2	0.19468	52.64117	0.50883	1.01414	0.99099	0.48280	0.53583	51.55259	0.51050
Mean	0.19404	52.81637	0.50868	1.01670	0.99394	0.48309	0.53301	51.56868	0.51082
%RSD	0.46533	0.46910	0.03965	0.35608	0.41994	0.08614	0.75018	0.04411	0.08919
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.48498	0.96308	1.03594	20.49648	49.86084	0.49867	51.49782	0.96508	0.98855
#2	0.48394	0.96045	1.02963	20.45428	49.42369	0.49435	51.29703	0.96405	0.99231
Mean	0.48446	0.96176	1.03278	20.47538	49.64226	0.49651	51.39742	0.96457	0.99043
%RSD	0.15180	0.19363	0.43208	0.14574	0.62268	0.61528	0.27623	0.07544	0.26808
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	48.79873	1.00395	5.20461	0.99404	0.97969	5.17088	0.50069	1.01904	0.99465
#2	48.53614	0.99360	5.18679	0.99091	0.97693	5.19433	0.49875	1.01585	1.00118
Mean	48.66743	0.99877	5.19570	0.99247	0.97831	5.18261	0.49972	1.01744	0.99791
%RSD	0.38153	0.73299	0.24260	0.22335	0.19907	0.31995	0.27516	0.22201	0.46283
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.89331	1.06624	0.49977	0.34957	0.47288	0.52914	4.86454	0.48259	0.97582
#2	4.87525	1.06732	0.49667	0.35514	0.47193	0.53892	4.82348	0.48170	0.97845
Mean	4.88428	1.06678	0.49822	0.35236	0.47240	0.53403	4.84401	0.48214	0.97713
%RSD	0.26144	0.07139	0.43960	1.11791	0.14252	1.29457	0.59932	0.13100	0.19049
	Zr ppm	Pb calc	Se calc						
#1	0.99843	0.98447	1.00277						
#2	0.99372	0.98158	1.00606						
Mean	0.99607	0.98303	1.00442						
%RSD	0.33444	0.20723	0.23182						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:42

SampleId1 : CCB

SampleId2 :

[CB]

Analysis commenced : 10/10/2011 13:30:16

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00030	0.09664	-0.00028	-0.00125	0.00008	0.00071	-0.00646	0.05372	0.00023
#2	-0.00079	0.08835	-0.00283	-0.00173	0.00001	0.00067	-0.00062	0.04800	0.00019
Mean	-0.00055	0.09249	-0.00156	-0.00149	0.00005	0.00069	-0.00354	0.05086	0.00021
%RSD	63.36807	6.33585	116.08595	22.88522	99.68012	3.53493	116.74154	7.95294	11.37520

ted: 10/11/2011 11:38:21 User: MIKE LUNDGREEN

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00059	-0.00011	-0.00161	0.02000	-0.05467	0.00398	0.03393	0.00030	0.00026
#2	-0.00028	-0.00027	-0.00144	0.01782	-0.05896	0.00394	0.02817	0.00022	-0.00042
<b>Mean</b>	<b>-0.00044</b>	<b>-0.00019</b>	<b>-0.00152</b>	<b>0.01891</b>	<b>-0.05682</b>	<b>0.00396</b>	<b>0.03105</b>	<b>0.00026</b>	<b>-0.00008</b>
%RSD	49.09008	60.69821	7.85033	8.15129	5.34023	0.67021	13.12938	21.22496	587.78006

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.04843	-0.00089	0.00009	-0.00061	0.00178	0.00392	0.00032	-0.00322	-0.00034
#2	0.03677	-0.00151	0.00424	-0.00139	0.00093	0.00101	-0.00313	0.00059	-0.00215
<b>Mean</b>	<b>0.04260</b>	<b>-0.00120</b>	<b>0.00216</b>	<b>-0.00100</b>	<b>0.00136</b>	<b>0.00247</b>	<b>-0.00140</b>	<b>-0.00131</b>	<b>-0.00125</b>
%RSD	19.36317	36.70263	135.82415	54.84588	44.32048	83.49045	173.79415	205.17350	103.12030

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01592	-0.00122	-0.00238	0.00392	-0.00125	0.00508	-0.01523	-0.00065	0.00059
#2	-0.01582	-0.00264	-0.00245	-0.00096	-0.00131	-0.00011	-0.01292	-0.00040	0.00088
<b>Mean</b>	<b>-0.01587</b>	<b>-0.00193</b>	<b>-0.00242</b>	<b>0.00148</b>	<b>-0.00128</b>	<b>0.00248</b>	<b>-0.01407</b>	<b>-0.00052</b>	<b>0.00074</b>
%RSD	0.44964	52.37939	2.24942	233.63204	3.20619	147.75544	11.60589	33.27846	27.78714

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00156	0.00098	-0.00130
#2	0.00148	0.00016	-0.00124
<b>Mean</b>	<b>0.00152</b>	<b>0.00057</b>	<b>-0.00127</b>
%RSD	3.87604	102.15470	3.22025

Method : Paragon File : 111010A  
 SampleId1 : 1110028-14 SampleId2 :  
 Analysis commenced : 10/10/2011 13:32:10  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:42

[SAMPLE]

Position : TUBE21

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00014	0.02554	-0.00529	0.00874	0.02582	0.00037	-0.00322	55.34202	-0.00003
#2	0.00038	0.02966	-0.00340	0.00916	0.02600	0.00035	-0.00516	55.35186	-0.00025
<b>Mean</b>	<b>0.00026</b>	<b>0.02760</b>	<b>-0.00434</b>	<b>0.00895</b>	<b>0.02591</b>	<b>0.00036</b>	<b>-0.00419</b>	<b>55.34694</b>	<b>-0.00014</b>
%RSD	64.33373	10.56051	30.77903	3.26685	0.47856	3.27261	32.76786	0.01257	111.71387

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00091	-0.00019	-0.00263	0.00391	0.97837	0.01487	4.40383	0.26602	-0.00123
#2	-0.00049	-0.00030	-0.00204	0.00412	0.97384	0.01493	4.43355	0.26633	-0.00001
<b>Mean</b>	<b>-0.00070</b>	<b>-0.00024</b>	<b>-0.00234</b>	<b>0.00402</b>	<b>0.97611</b>	<b>0.01490</b>	<b>4.41869</b>	<b>0.26617</b>	<b>-0.00062</b>
%RSD	42.78733	33.22287	17.79337	3.65582	0.32780	0.26049	0.47554	0.08324	138.30160

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	38.75926	-0.00131	-0.00314	-0.00015	-0.00143	32.35448	0.00053	-0.00322	-0.00107
#2	39.01512	-0.00160	-0.00499	-0.00149	-0.00099	32.64460	-0.00079	-0.00590	-0.00230
<b>Mean</b>	<b>38.88719</b>	<b>-0.00146</b>	<b>-0.00407</b>	<b>-0.00082</b>	<b>-0.00121</b>	<b>32.49954</b>	<b>-0.00013</b>	<b>-0.00456</b>	<b>-0.00168</b>
%RSD	0.46524	14.44304	32.08777	115.02614	26.19704	0.63122	722.67256	41.53194	51.84458

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.01894	-0.00157	1.18017	-0.00469	-0.00202	-0.00235	-0.01925	-0.00047	0.00292
#2	4.04372	-0.00300	1.18794	-0.00708	-0.00208	0.00421	-0.00598	-0.00023	0.00263
<b>Mean</b>	<b>4.03133</b>	<b>-0.00229</b>	<b>1.18406</b>	<b>-0.00589</b>	<b>-0.00205</b>	<b>0.00093</b>	<b>-0.01262</b>	<b>-0.00035</b>	<b>0.00277</b>
%RSD	0.43466	44.21206	0.46379	28.64586	1.99280	498.39073	74.36795	49.85409	7.40841

	Zr ppm	Pb calc	Se calc
#1	0.00160	-0.00101	-0.00178
#2	0.00165	-0.00115	-0.00350
<b>Mean</b>	<b>0.00163</b>	<b>-0.00108</b>	<b>-0.00264</b>
%RSD	2.38442	9.61339	45.91733

Method : Paragon File : 111010A  
SampleId1 : 1110028-15 SampleId2 :  
Analysis commenced : 10/10/2011 13:33:59  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:42  
[SAMPLE]  
Position : TUBE22

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00093	0.03805	0.00237	0.01171	0.04291	0.00040	-0.00529	45.52658	-0.00041
#2	-0.00054	0.03513	0.00256	0.01123	0.04294	0.00040	-0.00448	45.41587	-0.00067
<b>Mean</b>	<b>-0.00074</b>	<b>0.03659</b>	<b>0.00246</b>	<b>0.01147</b>	<b>0.04292</b>	<b>0.00040</b>	<b>-0.00489</b>	<b>45.47122</b>	<b>-0.00054</b>
%RSD	37.56874	5.64209	5.42814	2.97518	0.05779	0.79955	11.74088	0.17216	34.06671

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00065	-0.00089	0.01114	0.00246	0.86774	0.00465	12.31383	0.00014	-0.00117
#2	-0.00101	-0.00086	0.01114	0.00246	0.86842	0.00464	12.33248	0.00022	-0.00225
<b>Mean</b>	<b>-0.00083</b>	<b>-0.00088</b>	<b>0.01114</b>	<b>0.00246</b>	<b>0.86808</b>	<b>0.00464</b>	<b>12.32316</b>	<b>0.00018</b>	<b>-0.00171</b>
%RSD	30.98489	2.18047	0.00000	0.00000	0.05528	0.04399	0.10701	30.32853	44.89006

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	23.14336	-0.00110	-0.00153	0.00012	0.00086	20.74394	0.00043	0.00048	0.00409
#2	23.13603	-0.00140	-0.00752	-0.00264	-0.00034	20.79466	-0.00003	-0.00031	-0.00136
<b>Mean</b>	<b>23.13969</b>	<b>-0.00125</b>	<b>-0.00453</b>	<b>-0.00126</b>	<b>0.00026</b>	<b>20.76930</b>	<b>0.00020</b>	<b>0.00008</b>	<b>0.00137</b>
%RSD	0.02240	16.85262	93.66005	154.39176	324.05850	0.17267	159.43527	658.69332	281.96200

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.10142	0.00093	0.52001	-0.01044	-0.00185	0.00507	-0.01983	-0.00047	0.03111
#2	4.08686	-0.00264	0.52036	-0.01155	-0.00183	-0.00103	-0.01983	-0.00044	0.03111
<b>Mean</b>	<b>4.09414</b>	<b>-0.00086</b>	<b>0.52019</b>	<b>-0.01100</b>	<b>-0.00184</b>	<b>0.00202</b>	<b>-0.01983</b>	<b>-0.00046</b>	<b>0.03111</b>
%RSD	0.25147	294.90334	0.04769	7.12367	0.95391	213.76739	0.00000	5.46508	0.00000

	Zr ppm	Pb calc	Se calc
#1	0.00071	0.00061	0.00289
#2	0.00079	-0.00111	-0.00101
<b>Mean</b>	<b>0.00075</b>	<b>-0.00025</b>	<b>0.00094</b>
%RSD	8.03328	494.18732	293.20716

Method : Paragon File : 111010A  
SampleId1 : 1110035-9 SampleId2 :  
Analysis commenced : 10/10/2011 13:35:48  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:42

[SAMPLE]

Position : TUBE23

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00049	0.04399	0.00152	0.01074	0.03410	0.00034	-0.00613	3.99063	-0.00045
#2	-0.00068	0.04379	-0.00217	0.01040	0.03414	0.00033	0.00084	3.97808	-0.00043
<b>Mean</b>	<b>-0.00059</b>	<b>0.04389</b>	<b>-0.00033</b>	<b>0.01057</b>	<b>0.03412</b>	<b>0.00034</b>	<b>-0.00265</b>	<b>3.98436</b>	<b>-0.00044</b>
%RSD	22.86232	0.32715	800.24215	2.30526	0.07270	1.31992	186.46957	0.22283	4.05420

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00042	-0.00105	-0.00041	-0.00335	0.61557	0.00775	0.21142	0.01848	-0.00056
#2	-0.00115	-0.00108	-0.00023	-0.00356	0.60766	0.00774	0.21183	0.01856	0.00114
<b>Mean</b>	<b>-0.00078</b>	<b>-0.00106</b>	<b>-0.00032</b>	<b>-0.00346</b>	<b>0.61162</b>	<b>0.00774</b>	<b>0.21162</b>	<b>0.01852</b>	<b>0.00029</b>
%RSD	65.85451	1.54801	38.65579	4.24486	0.91493	0.07917	0.13760	0.29798	411.39427

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	102.48755	-0.00151	-0.00038	-0.00301	-0.00048	17.96182	-0.00012	-0.00355	-0.00325
#2	102.57997	-0.00193	0.00262	-0.00285	0.00066	17.96777	-0.00333	-0.00098	-0.00020
<b>Mean</b>	<b>102.53376</b>	<b>-0.00172</b>	<b>0.00112</b>	<b>-0.00293</b>	<b>0.00009</b>	<b>17.96480</b>	<b>-0.00173</b>	<b>-0.00227</b>	<b>-0.00172</b>
%RSD	0.06374	17.08036	188.72052	3.81335	914.40128	0.02341	131.54549	80.16970	125.26813

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.56845	-0.00443	0.08772	-0.00056	-0.00198	-0.00057	-0.01636	-0.00051	0.00815
#2	4.57709	0.00057	0.08809	-0.00022	-0.00163	-0.00012	-0.02329	-0.00023	0.00670
<b>Mean</b>	<b>4.57277</b>	<b>-0.00193</b>	<b>0.08790</b>	<b>-0.00039</b>	<b>-0.00181</b>	<b>-0.00035</b>	<b>-0.01983</b>	<b>-0.00037</b>	<b>0.00742</b>
%RSD	0.13374	183.38068	0.29442	61.99470	13.92317	91.46888	24.69474	54.01565	13.84090

	Zr ppm	Pb calc	Se calc
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#1	0.00030	-0.00132	-0.00335	UNDGREEN
#2	0.00002	-0.00051	-0.00046	
Mean	0.00016	-0.00092	-0.00190	
%RSD	121.24531	62.49229	107.37786	

Method : Paragon File : 111010A  
SampleId1 : 1110035-10 SampleId2 :  
Analysis commenced : 10/10/2011 13:37:37  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:42  
[SAMPLE]

Position : TUBE24

# Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00005	0.03715	0.00190	0.00330	0.04347	0.00029	-0.00014	7.46493	-0.00090
#2	-0.00064	0.04215	0.00275	0.00295	0.04357	0.00029	-0.00679	7.46729	-0.00026
Mean	-0.00035	0.03965	0.00232	0.00313	0.04352	0.00029	-0.00346	7.46611	-0.00058
%RSD	119.85874	8.91700	25.91884	7.79246	0.17100	0.64459	135.86350	0.02241	78.93855

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00089	-0.00086	-0.00237	-0.00367	0.39245	0.00715	1.01464	0.01934	0.00955
#2	-0.00089	-0.00081	-0.00255	-0.00273	0.39019	0.00718	1.01341	0.01926	0.00928
Mean	-0.00089	-0.00083	-0.00246	-0.00320	0.39132	0.00717	1.01402	0.01930	0.00941
%RSD	0.01586	4.60275	4.90432	20.65158	0.40842	0.25655	0.08619	0.28594	2.03788

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	79.38522	-0.00169	0.00032	0.00107	0.00073	22.13824	-0.00237	-0.00177	-0.00470
#2	79.76109	-0.00148	-0.01029	-0.00064	-0.00004	22.35639	-0.00126	-0.00042	-0.00114
Mean	79.57315	-0.00159	-0.00499	0.00021	0.00034	22.24731	-0.00182	-0.00109	-0.00292
%RSD	0.33401	9.25908	150.38516	569.01883	159.82057	0.69336	43.15464	86.96428	86.17777

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	2.97653	0.00200	0.14168	0.00093	-0.00167	-0.00404	-0.02098	-0.00040	0.00234
#2	2.99816	-0.00193	0.14206	-0.00115	-0.00169	-0.00231	-0.02156	-0.00076	0.00321
Mean	2.98735	0.00004	0.14187	-0.00011	-0.00168	-0.00317	-0.02127	-0.00058	0.00277
%RSD	0.51204	7646.74886	0.19231	1310.59916	1.04303	38.57418	1.92046	42.91172	22.22524

	Zr ppm	Pb calc	Se calc
#1	0.00137	0.00084	-0.00372
#2	0.00126	-0.00024	-0.00090
Mean	0.00132	0.00030	-0.00231
%RSD	6.19546	256.48701	86.30157

Method : Paragon File : 111010A  
SampleId1 : 1110035-11 SampleId2 :  
Analysis commenced : 10/10/2011 13:39:27

Printed : 10/11/2011 11:37:42  
[SAMPLE]

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : TUBE25

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00069	0.08902	-0.00009	0.12650	0.05392	0.00031	-0.00110	9.06638	-0.00049
#2	-0.00059	0.09144	0.00076	0.12622	0.05424	0.00030	-0.00808	9.05584	-0.00035
Mean	-0.00064	0.09023	0.00034	0.12636	0.05408	0.00030	-0.00459	9.06111	-0.00042
%RSD	11.13200	1.90081	179.07915	0.15435	0.41289	3.08595	107.41798	0.08228	25.05402
	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00100	-0.00105	-0.00152	0.07681	2.03187	0.04435	5.64530	0.00061	-0.00178
#2	-0.00076	-0.00067	-0.00143	0.07805	2.03708	0.04454	5.64777	0.00077	-0.00151
Mean	-0.00088	-0.00086	-0.00148	0.07743	2.03447	0.04444	5.64653	0.00069	-0.00164
%RSD	19.61230	31.13739	4.20163	1.13828	0.18120	0.30336	0.03103	16.01338	11.68619
	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	251.81025	-0.00009	-0.01306	-0.00169	-0.00079	1.54376	-0.00180	0.00394	-0.00011
#2	251.02454	-0.00172	-0.00683	-0.00223	-0.00005	1.55543	-0.00180	0.00080	-0.00018
Mean	251.41739	-0.00091	-0.00995	-0.00196	-0.00042	1.54960	-0.00180	0.00237	-0.00014
%RSD	0.22098	127.68617	44.26562	19.65367	124.50716	0.53279	0.06381	93.59676	35.51640
	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	6.20906	-0.00122	0.27467	-0.00697	-0.00045	0.00255	-0.01873	0.00042	0.00379
#2	6.24358	-0.00443	0.27577	-0.00786	-0.00069	0.00000	-0.02161	0.00028	0.00553
Mean	6.22632	-0.00282	0.27522	-0.00742	-0.00057	0.00127	-0.02017	0.00035	0.00466
%RSD	0.39200	80.52945	0.28356	8.45262	30.79704	141.45496	10.11737	28.31211	26.44297
	Zr	Pb	Se						
	ppm	calc	calc						
#1	0.00098	-0.00109	0.00124						
#2	0.00081	-0.00078	0.00015						
Mean	0.00089	-0.00093	0.00069						
%RSD	13.52661	23.86248	111.47303						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:43

SampleId1 : 1110035-12

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 13:41:16

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : TUBE26

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00078	0.02473	-0.00189	0.00868	0.24918	0.00028	-0.00782	35.18128	-0.00065
#2	-0.00044	0.02526	-0.00274	0.01040	0.25132	0.00028	-0.00295	35.19687	-0.00022

<b>Mean</b>	<b>-0.00061</b>	<b>0.02499</b>	<b>-0.00231</b>	<b>0.00954</b>	<b>0.25025</b>	<b>0.00028</b>	<b>-0.00538</b>	<b>35.18907</b>	<b>-0.00044</b>
<b>%RSD</b>	39.04524	1.49580	26.03211	12.77574	0.60648	0.68028	64.00493	0.03134	70.58438
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00121	-0.00138	0.03800	-0.00502	1.04421	0.00808	6.11121	-0.00040	-0.00137
#2	-0.00072	-0.00097	0.03851	-0.00450	1.04602	0.00810	6.15252	-0.00033	-0.00184
<b>Mean</b>	<b>-0.00096</b>	<b>-0.00117</b>	<b>0.03825</b>	<b>-0.00476</b>	<b>1.04512</b>	<b>0.00809</b>	<b>6.13186</b>	<b>-0.00036</b>	<b>-0.00161</b>
<b>%RSD</b>	35.78927	24.25773	0.94296	7.71675	0.12248	0.15152	0.47637	15.14627	20.88224
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	39.08181	-0.00151	-0.00799	-0.00214	0.00273	14.02391	-0.00246	-0.00244	0.00038
#2	39.44848	-0.00166	-0.00084	-0.00320	-0.00038	14.05944	0.00009	-0.00243	0.00053
<b>Mean</b>	<b>39.26514</b>	<b>-0.00159</b>	<b>-0.00441</b>	<b>-0.00267</b>	<b>0.00118</b>	<b>14.04167</b>	<b>-0.00118</b>	<b>-0.00243</b>	<b>0.00046</b>
<b>%RSD</b>	0.66033	6.61363	114.59084	28.32260	186.96903	0.17893	152.18226	0.09302	22.49987
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.41320	0.00129	1.04262	-0.00606	-0.00183	0.00452	-0.01867	-0.00083	0.02239
#2	4.44329	0.00057	1.05121	-0.00673	-0.00183	0.00143	-0.01463	-0.00055	0.02152
<b>Mean</b>	<b>4.42824</b>	<b>0.00093</b>	<b>1.04692</b>	<b>-0.00639</b>	<b>-0.00183</b>	<b>0.00297</b>	<b>-0.01665</b>	<b>-0.00069</b>	<b>0.02196</b>
<b>%RSD</b>	0.48047	54.34796	0.58008	7.48929	0.31941	73.57613	17.15034	29.05220	2.80824
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	-0.00014	0.00111	-0.00055						
#2	0.00015	-0.00132	-0.00046						
<b>Mean</b>	<b>0.00000</b>	<b>-0.00010</b>	<b>-0.00051</b>						
<b>%RSD</b>	5556.02483	1644.57840	13.70204						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:43

SampleId1 : IP111007-2MB

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 13:45:05

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE27

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00039	0.02259	-0.00047	-0.00470	-0.00086	0.00019	-0.00435	0.00016	-0.00039
#2	-0.00079	0.02640	-0.00047	-0.00435	-0.00083	0.00020	-0.00533	0.00016	-0.00066
<b>Mean</b>	<b>-0.00059</b>	<b>0.02449</b>	<b>-0.00047</b>	<b>-0.00452</b>	<b>-0.00084</b>	<b>0.00020</b>	<b>-0.00484</b>	<b>0.00016</b>	<b>-0.00053</b>
<b>%RSD</b>	47.28578	10.99437	0.00000	5.38715	2.93632	1.14657	14.21480	0.00000	36.94723
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00053	-0.00075	-0.00246	0.00983	-0.05422	0.00369	-0.03525	-0.00033	-0.00266
#2	-0.00041	-0.00070	-0.00238	0.01014	-0.05987	0.00370	-0.03195	-0.00025	-0.00259
<b>Mean</b>	<b>-0.00047</b>	<b>-0.00073</b>	<b>-0.00242</b>	<b>0.00998</b>	<b>-0.05704</b>	<b>0.00369</b>	<b>-0.03360</b>	<b>-0.00029</b>	<b>-0.00262</b>

%RSD	18.37688	5.16074	2.46142	2.20556	6.99880	0.16604	6.93237	19.27502	1.82699
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.05827	-0.00151	-0.00453	0.00084	-0.00232	-0.02813	-0.00359	-0.00098	-0.00114
#2	-0.05808	-0.00238	-0.00038	0.00101	-0.00052	-0.02813	0.00041	-0.00053	-0.00252
<b>Mean</b>	<b>-0.05817</b>	<b>-0.00195</b>	<b>-0.00245</b>	<b>0.00092</b>	<b>-0.00142</b>	<b>-0.02813</b>	<b>-0.00159</b>	<b>-0.00076</b>	<b>-0.00183</b>
%RSD	0.23312	31.32691	119.74561	13.36667	89.80144	0.00000	178.36596	42.00233	53.37322
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01528	-0.00086	-0.00313	0.00018	-0.00134	0.00443	-0.02041	-0.00037	0.01193
#2	-0.01528	-0.00121	-0.00309	-0.00282	-0.00149	0.00462	-0.01868	-0.00054	0.01193
<b>Mean</b>	<b>-0.01528</b>	<b>-0.00104</b>	<b>-0.00311</b>	<b>-0.00132</b>	<b>-0.00141</b>	<b>0.00452</b>	<b>-0.01955</b>	<b>-0.00046</b>	<b>0.01193</b>
%RSD	0.01019	24.37809	0.87436	160.56055	7.44841	2.86469	6.26128	27.40357	0.00000
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00036	-0.00127	-0.00109						
#2	0.00059	-0.00001	-0.00186						
<b>Mean</b>	<b>0.00048</b>	<b>-0.00064</b>	<b>-0.00147</b>						
%RSD	33.67439	139.47735	37.03886						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:43

SampleId1 : ZZZ

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 13:46:54

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE28

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00069	0.08307	-0.00009	0.00661	0.00019	0.00078	-0.00559	0.52403	-0.00015
#2	0.00000	0.08325	-0.00236	0.00695	0.00019	0.00073	-0.00185	0.52975	-0.00041
<b>Mean</b>	<b>-0.00035</b>	<b>0.08316</b>	<b>-0.00122</b>	<b>0.00678</b>	<b>0.00019</b>	<b>0.00076</b>	<b>-0.00372</b>	<b>0.52689</b>	<b>-0.00028</b>
%RSD	139.99266	0.15340	131.08425	3.59411	0.00000	5.42320	70.96965	0.76829	65.40224
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00008	0.00402	0.00755	0.05032	0.26544	0.01020	0.06934	0.00163	-0.00083
#2	0.00089	0.00432	0.00789	0.05032	0.27854	0.01018	0.07182	0.00163	-0.00096
<b>Mean</b>	<b>0.00040</b>	<b>0.00417</b>	<b>0.00772</b>	<b>0.05032</b>	<b>0.27199</b>	<b>0.01019</b>	<b>0.07058</b>	<b>0.00163</b>	<b>-0.00090</b>
%RSD	170.88279	4.97531	3.08992	0.00000	3.40734	0.08019	2.47533	0.00000	10.71126
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.66002	0.00381	0.00101	-0.00145	0.00254	-0.01647	-0.00173	0.00148	0.00265
#2	0.65745	0.00425	-0.00752	0.00090	-0.00209	-0.01939	-0.00218	0.00854	-0.00324
<b>Mean</b>	<b>0.65874</b>	<b>0.00403</b>	<b>-0.00326</b>	<b>-0.00028</b>	<b>0.00022</b>	<b>-0.01793</b>	<b>-0.00196</b>	<b>0.00501</b>	<b>-0.00029</b>
%RSD	0.27516	7.82540	185.17181	599.04299	1471.36861	11.49182	16.22590	99.71672	1411.46755



ted: 10/11/2011 11:38:21 User: MIKE LUNDGREEN

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01358	0.00770	-0.00214	-0.00487	0.01826	0.00573	-0.02217	0.00052	0.02617
#2	-0.01359	0.00484	-0.00208	0.00102	0.01866	0.00582	-0.01582	0.00035	0.02879
Mean	-0.01358	0.00627	-0.00211	-0.00193	0.01846	0.00577	-0.01900	0.00043	0.02748
%RSD	0.05460	32.26375	1.93305	216.47282	1.51995	1.16242	23.62504	28.68772	6.73178

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00064	0.00121	0.00226
#2	0.00037	-0.00110	0.00069
Mean	0.00050	0.00006	0.00147
%RSD	38.35854	2910.95315	75.53714

Method : Paragon File : 111010A  
 SampleId1 : IP111007-2LCS SampleId2 :  
 Analysis commenced : 10/10/2011 13:48:43  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:43  
 [SAMPLE]

Position : TUBE29

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00006	2.01180	2.00949	0.49526	1.92188	0.04950	0.00059	0.00406	0.04947
#2	0.00010	2.00577	2.00901	0.49367	1.92498	0.04938	0.00092	0.00328	0.05045
Mean	0.00002	2.00878	2.00925	0.49447	1.92343	0.04944	0.00076	0.00367	0.04996
%RSD	504.58228	0.21222	0.01700	0.22712	0.11388	0.16485	30.40336	15.03157	1.39112

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.48131	0.19301	0.24958	0.99142	-0.06732	0.00369	-0.04101	0.48265	0.95804
#2	0.48046	0.19266	0.25001	0.99027	-0.07048	0.00370	-0.03937	0.48203	0.95626
Mean	0.48089	0.19283	0.24979	0.99085	-0.06890	0.00369	-0.04019	0.48234	0.95715
%RSD	0.12479	0.12741	0.12264	0.08214	3.24481	0.11065	2.89795	0.09217	0.13110

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.06225	0.50449	10.15621	0.48901	0.46868	9.98257	0.49282	2.01239	1.95845
#2	-0.06215	0.50270	10.19578	0.49212	0.47010	9.91183	0.49214	2.01170	1.95043
Mean	-0.06220	0.50359	10.17600	0.49057	0.46939	9.94720	0.49248	2.01204	1.95444
%RSD	0.10901	0.25088	0.27497	0.44828	0.21393	0.50283	0.09754	0.02424	0.29020

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.96612	0.52267	0.48042	0.00353	0.46026	1.97669	-0.01820	0.48228	0.50069
#2	1.96505	0.51981	0.48091	0.00397	0.46108	1.99643	-0.02512	0.48111	0.49952
Mean	1.96559	0.52124	0.48067	0.00375	0.46067	1.98656	-0.02166	0.48169	0.50010
%RSD	0.03856	0.38868	0.07304	8.23182	0.12581	0.70276	22.60475	0.17153	0.16490

	<b>Zr</b>	<b>Pb</b>	<b>SeUNDGREEN</b>
	ppm	calc	calc
#1	0.00144	0.47545	1.97641
#2	0.00117	0.47743	1.97083
<b>Mean</b>	<b>0.00131</b>	<b>0.47644</b>	<b>1.97362</b>
%RSD	14.71516	0.29428	0.19991

Method : Paragon File : 111010A  
SampleId1 : IP111007-2LCSD SampleId2 :  
Analysis commenced : 10/10/2011 13:50:32  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:43

[SAMPLE]

Position : TUBE30

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00015	2.00892	1.99925	0.49215	1.91605	0.04921	-0.00039	0.00380	0.05006
#2	0.00039	2.00072	1.99655	0.49319	1.91565	0.04911	-0.00656	0.00354	0.04970
<b>Mean</b>	<b>0.00012</b>	<b>2.00482</b>	<b>1.99790</b>	<b>0.49267</b>	<b>1.91585</b>	<b>0.04916</b>	<b>-0.00347</b>	<b>0.00367</b>	<b>0.04988</b>
%RSD	316.54713	0.28921	0.09570	0.14866	0.01462	0.14721	125.68451	5.01053	0.50977

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.47723	0.19203	0.24898	0.98337	-0.07364	0.00369	-0.04431	0.47935	0.95401
#2	0.47632	0.19225	0.24769	0.98180	-0.07477	0.00368	-0.03937	0.47872	0.95551
<b>Mean</b>	<b>0.47678</b>	<b>0.19214</b>	<b>0.24833</b>	<b>0.98258</b>	<b>-0.07421</b>	<b>0.00368</b>	<b>-0.04184</b>	<b>0.47904</b>	<b>0.95476</b>
%RSD	0.13516	0.07839	0.36678	0.11295	1.07597	0.22183	8.35158	0.09280	0.11121

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.07179	0.50136	10.19676	0.48663	0.47112	10.03267	0.48946	2.02037	1.96513
#2	-0.07188	0.50088	10.17575	0.48343	0.47083	9.96783	0.49014	2.02141	1.96803
<b>Mean</b>	<b>-0.07184</b>	<b>0.50112</b>	<b>10.18626</b>	<b>0.48503</b>	<b>0.47097</b>	<b>10.00025</b>	<b>0.48980</b>	<b>2.02089</b>	<b>1.96658</b>
%RSD	0.09437	0.06723	0.14583	0.46722	0.04325	0.45851	0.09794	0.03609	0.10414

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.99662	0.51802	0.47970	0.00642	0.45752	1.98031	-0.01819	0.47888	0.49486
#2	1.98738	0.52196	0.47908	0.00238	0.45693	1.97560	-0.01242	0.47820	0.49340
<b>Mean</b>	<b>1.99200</b>	<b>0.51999</b>	<b>0.47939</b>	<b>0.00440</b>	<b>0.45722</b>	<b>1.97796</b>	<b>-0.01530</b>	<b>0.47854</b>	<b>0.49413</b>
%RSD	0.32810	0.53563	0.09046	64.88018	0.09219	0.16829	26.66460	0.09944	0.20861

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00007	0.47628	1.98353
#2	0.00036	0.47503	1.98580
<b>Mean</b>	<b>0.00021</b>	<b>0.47565</b>	<b>1.98467</b>
%RSD	97.66093	0.18722	0.08107

Method : Paragon File : 111010A

Printed : 10/11/2011 11:37:43

SampleId1 : CCV                      SampleId2 :  
 Analysis commenced : 10/10/2011 13:53:55  
 Dilution ratio : 1.00000 to 1.00000      Tray :

[CV]

Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19677	52.72652	0.51234	1.01794	0.99049	0.48213	0.53877	51.88440	0.51733
#2	0.19553	52.71616	0.51425	1.01871	0.99341	0.48258	0.53487	51.87097	0.51595
Mean	<b>0.19615</b>	<b>52.72134</b>	<b>0.51330</b>	<b>1.01832</b>	<b>0.99195</b>	<b>0.48236</b>	<b>0.53682</b>	<b>51.87769</b>	<b>0.51664</b>
%RSD	0.44891	0.01390	0.26198	0.05285	0.20785	0.06525	0.51256	0.01831	0.18952
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.48601	0.96280	1.03683	20.44541	49.65226	0.49549	51.31478	0.96120	0.99565
#2	0.48529	0.96274	1.03681	20.46663	49.57223	0.49515	51.32366	0.96191	0.99497
Mean	<b>0.48565</b>	<b>0.96277</b>	<b>1.03682</b>	<b>20.45602</b>	<b>49.61225</b>	<b>0.49532</b>	<b>51.31922</b>	<b>0.96156</b>	<b>0.99531</b>
%RSD	0.10594	0.00470	0.00098	0.07334	0.11407	0.04858	0.01223	0.05239	0.04850
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	49.13439	1.01454	5.14544	0.99392	0.96807	5.13278	0.49998	1.00714	0.98619
#2	49.05116	1.01457	5.13498	0.99158	0.97529	5.12398	0.50821	1.02468	0.99802
Mean	<b>49.09277</b>	<b>1.01456</b>	<b>5.14021</b>	<b>0.99275</b>	<b>0.97168</b>	<b>5.12838</b>	<b>0.50409</b>	<b>1.01591</b>	<b>0.99211</b>
%RSD	0.11987	0.00208	0.14382	0.16640	0.52519	0.12124	1.15478	1.22082	0.84341
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.85810	1.06804	0.49679	0.35260	0.46684	0.53519	4.82464	0.48290	0.97406
#2	4.86164	1.06230	0.49795	0.35401	0.46778	0.53694	4.84315	0.48294	0.97377
Mean	<b>4.85987</b>	<b>1.06517</b>	<b>0.49737</b>	<b>0.35331</b>	<b>0.46731</b>	<b>0.53606</b>	<b>4.83389</b>	<b>0.48292</b>	<b>0.97392</b>
%RSD	0.05137	0.38100	0.16478	0.28235	0.14282	0.23048	0.27066	0.00579	0.02124
	Zr ppm	Pb calc	Se calc						
#1	0.99789	0.97668	0.99317						
#2	0.99851	0.98071	1.00690						
Mean	<b>0.99820</b>	<b>0.97869</b>	<b>1.00003</b>						
%RSD	0.04421	0.29158	0.97108						

Method : Paragon                      File : 111010A  
 SampleId1 : CCB                      SampleId2 :  
 Analysis commenced : 10/10/2011 13:55:53  
 Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:37:44

[CB]

Position : STD2

Final concentrations

Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
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#1	0.00023	0.10185	0.00360	-0.00242	0.00001	0.00075	-0.00029	0.03942	0.00027
#2	-0.00054	0.10231	-0.00104	-0.00097	0.00015	0.00078	-0.00208	0.04332	-0.00009
<b>Mean</b>	<b>-0.00016</b>	<b>0.10208</b>	<b>0.00128</b>	<b>-0.00170</b>	<b>0.00008</b>	<b>0.00077</b>	<b>-0.00119</b>	<b>0.04137</b>	<b>0.00009</b>
%RSD	349.12529	0.32123	255.63252	60.29272	116.93748	2.87763	106.49007	6.66631	288.68532

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.00014	-0.00017	-0.00196	0.01502	-0.04609	0.00392	0.02487	0.00006	0.00046
#2	-0.00047	-0.00005	-0.00195	0.01637	-0.05151	0.00395	0.02775	0.00022	-0.00001
<b>Mean</b>	<b>-0.00016</b>	<b>-0.00011</b>	<b>-0.00195</b>	<b>0.01569</b>	<b>-0.04880</b>	<b>0.00394</b>	<b>0.02631</b>	<b>0.00014</b>	<b>0.00022</b>
%RSD	262.20910	74.65163	0.37341	6.08063	7.85390	0.41531	7.74611	77.21647	150.12963

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.03199	0.00012	0.00747	0.00197	-0.00087	0.00975	-0.00223	-0.00265	-0.00172
#2	-0.02796	0.00003	0.00354	-0.00277	-0.00068	-0.00773	-0.00369	0.00047	-0.00295
<b>Mean</b>	<b>-0.02998</b>	<b>0.00008</b>	<b>0.00551</b>	<b>-0.00040</b>	<b>-0.00078</b>	<b>0.00101</b>	<b>-0.00296</b>	<b>-0.00109</b>	<b>-0.00234</b>
%RSD	9.50357	83.45615	50.35836	838.11628	17.11813	1222.84920	34.66696	202.92552	37.36787

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.01775	0.00129	-0.00256	0.00011	-0.00145	0.00162	-0.00772	-0.00005	0.00059
#2	-0.01473	-0.00372	-0.00249	0.00214	-0.00146	-0.00085	-0.02099	0.00006	0.00059
<b>Mean</b>	<b>-0.01624</b>	<b>-0.00121</b>	<b>-0.00253</b>	<b>0.00113</b>	<b>-0.00145</b>	<b>0.00039</b>	<b>-0.01436</b>	<b>0.00000</b>	<b>0.00059</b>
%RSD	13.13392	291.24464	1.88216	127.10099	0.80407	449.90943	65.36561	1586.26063	0.00000

	Zr ppm	Pb calc	Se calc
#1	0.00190	0.00008	-0.00203
#2	0.00141	-0.00138	-0.00181
<b>Mean</b>	<b>0.00166</b>	<b>-0.00065</b>	<b>-0.00192</b>
%RSD	20.94182	157.71096	8.01812

Method : Paragon File : 111010A  
SampleId1 : 1109372-1 SampleId2 :  
Analysis commenced : 10/10/2011 13:57:51  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:44  
[SAMPLE]

Position : TUBE31

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00031	0.07497	-0.00094	0.07396	0.06673	0.00056	0.00134	290.38981	-0.00035
#2	-0.00062	0.07423	-0.00302	0.07348	0.06694	0.00055	-0.00500	287.96731	-0.00094
<b>Mean</b>	<b>-0.00015</b>	<b>0.07460</b>	<b>-0.00198</b>	<b>0.07372</b>	<b>0.06684</b>	<b>0.00055</b>	<b>-0.00183</b>	<b>289.17856</b>	<b>-0.00064</b>
%RSD	424.62801	0.69873	74.26723	0.46293	0.22277	0.88813	244.57171	0.59236	64.40091

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.00029	0.00079	-0.00198	0.93409	3.90176	0.04117	51.24166	0.06298	0.00175

#2	-0.00055	0.00015	-0.00240	0.93054	3.92063	0.04134	51.22518	0.06251	0.00256
<b>Mean</b>	<b>-0.00013</b>	<b>0.00047</b>	<b>-0.00219</b>	<b>0.93232</b>	<b>3.91119</b>	<b>0.04125</b>	<b>51.23342</b>	<b>0.06274</b>	<b>0.00216</b>
%RSD	464.94540	96.67253	13.52793	0.26970	0.34124	0.30698	0.02275	0.52806	26.68600

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	61.37522	0.00027	0.00285	0.00294	-0.00152	222.05807	0.00044	0.00197	-0.00088
#2	61.53764	-0.00015	0.00908	-0.00277	-0.00035	221.73506	-0.00467	0.00084	-0.00081
<b>Mean</b>	<b>61.45643</b>	<b>0.00006</b>	<b>0.00597</b>	<b>0.00009</b>	<b>-0.00093</b>	<b>221.89656</b>	<b>-0.00212</b>	<b>0.00140</b>	<b>-0.00084</b>
%RSD	0.18687	484.83179	73.79774	4593.63862	89.10366	0.10293	170.57713	56.90488	6.04625

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	7.88161	-0.00086	2.82803	-0.02604	-0.00211	0.00457	0.02050	0.00860	0.00234
#2	7.89085	0.00272	2.82798	-0.03421	-0.00231	0.00702	0.00897	0.00811	0.00118
<b>Mean</b>	<b>7.88623</b>	<b>0.00093</b>	<b>2.82800</b>	<b>-0.03013</b>	<b>-0.00221</b>	<b>0.00580</b>	<b>0.01473</b>	<b>0.00835</b>	<b>0.00176</b>
%RSD	0.08286	271.62380	0.00103	19.19000	6.61140	29.87255	55.36985	4.18881	46.79184

	Zr ppm	Pb calc	Se calc
#1	0.00200	-0.00003	0.00007
#2	0.00202	-0.00115	-0.00026
<b>Mean</b>	<b>0.00201</b>	<b>-0.00059</b>	<b>-0.00010</b>
%RSD	0.73839	133.21550	244.09004

Method : Paragon File : 111010A  
SampleId1 : 1109372-1D SampleId2 :  
Analysis commenced : 10/10/2011 13:59:43  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:44  
[SAMPLE]  
Position : TUBE32

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00008	0.07153	-0.00274	0.07168	0.05876	0.00050	-0.00532	280.12976	-0.00039
#2	0.00001	0.07666	-0.00066	0.07210	0.05915	0.00053	0.00085	280.06319	-0.00042
<b>Mean</b>	<b>-0.00003</b>	<b>0.07410</b>	<b>-0.00170</b>	<b>0.07189</b>	<b>0.05896</b>	<b>0.00051</b>	<b>-0.00224</b>	<b>280.09647</b>	<b>-0.00041</b>
%RSD	191.05949	4.88876	86.68232	0.40688	0.46293	4.69181	195.00299	0.01681	5.47745

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00050	-0.00096	-0.00275	0.90784	3.83013	0.04042	50.05388	0.06110	0.00256
#2	-0.00105	-0.00053	-0.00224	0.91056	3.82626	0.04055	50.10668	0.06126	0.00209
<b>Mean</b>	<b>-0.00078</b>	<b>-0.00075</b>	<b>-0.00249</b>	<b>0.90920</b>	<b>3.82820</b>	<b>0.04049</b>	<b>50.08028</b>	<b>0.06118</b>	<b>0.00233</b>
%RSD	49.58989	40.64314	14.47707	0.21145	0.07140	0.23714	0.07456	0.18051	14.43213

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	60.22902	0.00110	0.00585	-0.00094	-0.00134	216.58496	-0.00121	0.00656	0.00151
#2	60.25992	0.00116	0.00770	-0.00288	-0.00149	216.48488	-0.00333	-0.00688	-0.00001

<b>Mean</b>	<b>60.24447</b>	<b>0.00113</b>	<b>0.00677</b>	<b>-0.00191</b>	<b>-0.00141</b>	<b>216.53492</b>	<b>-0.00227</b>	<b>-0.00016</b>	<b>0.00075</b>
<b>%RSD</b>	0.03627	3.71753	19.26046	71.92018	7.25913	0.03268	66.14773	5983.72723	143.73509
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	7.69974	0.00129	2.76492	-0.03323	-0.00219	-0.00108	0.01706	0.00814	0.00437
#2	7.71513	0.00165	2.76531	-0.04130	-0.00251	0.00238	0.02110	0.00835	0.00321
<b>Mean</b>	<b>7.70743</b>	<b>0.00147</b>	<b>2.76511</b>	<b>-0.03726</b>	<b>-0.00235</b>	<b>0.00065</b>	<b>0.01908</b>	<b>0.00824</b>	<b>0.00379</b>
<b>%RSD</b>	0.14120	17.24832	0.00976	15.31581	9.69724	377.67128	14.96377	1.82123	21.68279
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00166	-0.00121	0.00319						
#2	0.00236	-0.00195	-0.00230						
<b>Mean</b>	<b>0.00201</b>	<b>-0.00158</b>	<b>0.00045</b>						
<b>%RSD</b>	24.62316	33.32868	868.10079						

Method : Paragon File : 111010A  
SampleId1 : 1109372-1L 5X SampleId2 :  
Analysis commenced : 10/10/2011 14:01:34  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:44

[SAMPLE]

Position : TUBE33

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00051	0.04311	-0.00463	0.01212	0.01313	0.00039	-0.00062	55.33837	0.00009
#2	0.00004	0.04871	-0.00491	0.01212	0.01316	0.00032	-0.00095	55.25741	-0.00001
<b>Mean</b>	<b>-0.00023</b>	<b>0.04591</b>	<b>-0.00477</b>	<b>0.01212</b>	<b>0.01315</b>	<b>0.00036</b>	<b>-0.00078</b>	<b>55.29789</b>	<b>0.00004</b>
<b>%RSD</b>	165.44514	8.61884	4.20500	0.00000	0.18862	12.33936	29.59645	0.10352	198.55171
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00039	-0.00057	-0.00256	0.19132	0.53373	0.00972	10.36579	0.01278	-0.00090
#2	-0.00069	-0.00084	-0.00255	0.19028	0.53305	0.00970	10.32977	0.01270	-0.00171
<b>Mean</b>	<b>-0.00054</b>	<b>-0.00071</b>	<b>-0.00256</b>	<b>0.19080</b>	<b>0.53339</b>	<b>0.00971</b>	<b>10.34778</b>	<b>0.01274</b>	<b>-0.00130</b>
<b>%RSD</b>	39.73806	26.50783	0.19830	0.38529	0.08991	0.14729	0.24613	0.43297	44.18705
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	10.84311	-0.00131	-0.00038	0.00097	0.00070	44.04261	-0.00091	0.00114	-0.00415
#2	10.78708	-0.00157	-0.00476	-0.00269	0.00127	44.08238	-0.00403	0.00394	-0.00357
<b>Mean</b>	<b>10.81509</b>	<b>-0.00144</b>	<b>-0.00257</b>	<b>-0.00086</b>	<b>0.00099</b>	<b>44.06250</b>	<b>-0.00247</b>	<b>0.00254</b>	<b>-0.00386</b>
<b>%RSD</b>	0.36631	13.13286	120.71943	299.70893	41.00542	0.06383	89.41354	77.84835	10.63773
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.59795	0.00093	0.57272	-0.00517	-0.00170	-0.00258	-0.00207	0.00168	0.00030
#2	1.59194	0.00415	0.57259	-0.01021	-0.00193	0.00379	-0.01130	0.00119	0.00088
<b>Mean</b>	<b>1.59495</b>	<b>0.00254</b>	<b>0.57265</b>	<b>-0.00769</b>	<b>-0.00182</b>	<b>0.00060</b>	<b>-0.00669</b>	<b>0.00143</b>	<b>0.00059</b>

%RSD	0.26612	89.61390	0.01567	46.27741	9.00440	746.98405	97.61671	24.39564	69.16384
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	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00076	0.00079	-0.00239
#2	0.00110	-0.00005	-0.00107
<b>Mean</b>	<b>0.00093</b>	<b>0.00037</b>	<b>-0.00173</b>
%RSD	25.36684	158.88307	53.83875

Method : Paragon                      File : 111010A  
**SampleId1 : 1109372-1A**                      **SampleId2 :**  
**Analysis commenced : 10/10/2011 14:03:23**  
Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:37:44  
**[SAMPLE]**

Position : TUBE34

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00037	2.11220	1.94895	0.56771	1.96422	0.04684	-0.00446	279.01911	0.04863
#2	0.00041	2.10020	1.95686	0.56819	1.95477	0.04695	-0.00089	280.92886	0.04918
<b>Mean</b>	<b>0.00002</b>	<b>2.10620</b>	<b>1.95291</b>	<b>0.56795</b>	<b>1.95950</b>	<b>0.04689</b>	<b>-0.00268</b>	<b>279.97399</b>	<b>0.04890</b>
%RSD	3076.61486	0.40295	0.28660	0.06020	0.34072	0.17064	94.28541	0.48233	0.79130

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.45679	0.18030	0.25144	1.83682	3.79420	0.04019	49.84479	0.51394	0.94070
#2	0.45762	0.18259	0.25024	1.84093	3.76556	0.03990	49.82832	0.51559	0.93893
<b>Mean</b>	<b>0.45720</b>	<b>0.18145</b>	<b>0.25084</b>	<b>1.83888</b>	<b>3.77988</b>	<b>0.04005</b>	<b>49.83655</b>	<b>0.51477</b>	<b>0.93981</b>
%RSD	0.12953	0.89354	0.33899	0.15799	0.53591	0.51519	0.02337	0.22682	0.13351

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	60.05021	0.47671	21.24146	0.47593	0.46650	237.27543	0.47355	2.03957	2.00096
#2	59.64780	0.47441	21.22932	0.47690	0.46094	237.32989	0.47796	2.02315	1.98997
<b>Mean</b>	<b>59.84900</b>	<b>0.47556</b>	<b>21.23539</b>	<b>0.47641</b>	<b>0.46372</b>	<b>237.30266</b>	<b>0.47576</b>	<b>2.03136</b>	<b>1.99547</b>
%RSD	0.47545	0.34090	0.04042	0.14426	0.84817	0.01623	0.65600	0.57169	0.38965

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	9.57700	0.50945	3.22835	-0.03083	0.44126	2.00197	0.00489	0.47005	0.45259
#2	9.57275	0.51052	3.20286	-0.02220	0.44147	2.00614	0.01065	0.47320	0.45900
<b>Mean</b>	<b>9.57488</b>	<b>0.50998</b>	<b>3.21560</b>	<b>-0.02652</b>	<b>0.44136</b>	<b>2.00406</b>	<b>0.00777</b>	<b>0.47163</b>	<b>0.45579</b>
%RSD	0.03144	0.14888	0.56050	23.00156	0.03316	0.14714	52.48449	0.47249	0.99485

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00364	0.46964	2.01382
#2	0.00277	0.46625	2.00102
<b>Mean</b>	<b>0.00320</b>	<b>0.46795</b>	<b>2.00742</b>
%RSD	19.32177	0.51171	0.45099

ted: 10/11/2011 11:38:21 User: MIKE LUNDGREEN  
 Method : Paragon File : 111010A  
 SampleId1 : 1109372-2 SampleId2 :  
 Analysis commenced : 10/10/2011 14:05:13  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:45  
 [SAMPLE]  
 Position : TUBE35

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00013	0.04102	0.00530	0.07086	0.05768	0.00043	-0.00224	278.73329	-0.00048
#2	0.00027	0.04500	0.00303	0.07092	0.05785	0.00037	-0.00094	279.00566	-0.00022
Mean	0.00007	0.04301	0.00417	0.07089	0.05776	0.00040	-0.00159	278.86948	-0.00035
%RSD	390.55509	6.53985	38.52324	0.06877	0.21477	9.22103	57.61158	0.06906	51.48843
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00069	-0.00064	-0.00198	0.78942	3.76124	0.03994	49.74342	0.05892	0.00290
#2	0.00004	-0.00036	-0.00274	0.79047	3.75578	0.03987	49.81480	0.05876	0.00426
Mean	-0.00032	-0.00050	-0.00236	0.78995	3.75851	0.03991	49.77911	0.05884	0.00358
%RSD	158.92353	38.62601	22.92821	0.09351	0.10265	0.12796	0.10139	0.18769	26.78620
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	59.68328	0.00012	0.00493	-0.00134	-0.00056	215.47026	0.00091	0.00355	0.00084
#2	59.48245	-0.00024	0.00539	-0.00081	-0.00020	215.92745	-0.00020	-0.00015	-0.00004
Mean	59.58286	-0.00006	0.00516	-0.00107	-0.00038	215.69885	0.00035	0.00170	0.00040
%RSD	0.23834	433.32940	6.32177	34.61347	66.85927	0.14988	220.57619	154.21852	154.31428
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	7.58838	-0.00336	2.72633	-0.03260	-0.00212	-0.00168	0.01541	0.00709	0.00263
#2	7.59078	0.00450	2.72770	-0.03282	-0.00209	0.00278	0.00848	0.00705	0.00088
Mean	7.58958	0.00057	2.72702	-0.03271	-0.00210	0.00055	0.01195	0.00707	0.00176
%RSD	0.02237	970.36388	0.03555	0.46884	0.83391	573.78019	40.98821	0.35086	70.18771
	Zr ppm	Pb calc	Se calc						
#1	0.00113	-0.00082	0.00174						
#2	0.00140	-0.00040	-0.00008						
Mean	0.00126	-0.00061	0.00083						
%RSD	15.08542	48.01526	154.24918						

Method : Paragon File : 111010A  
 SampleId1 : 1109372-3 SampleId2 :  
 Analysis commenced : 10/10/2011 14:07:02  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:45  
 [SAMPLE]  
 Position : TUBE36

Final concentrations



	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00029	0.04114	-0.00236	0.10519	0.04357	0.00048	0.00410	311.11378	-0.00031
#2	-0.00067	0.04318	-0.00321	0.10485	0.04361	0.00047	-0.00143	311.51932	-0.00070
Mean	-0.00048	0.04216	-0.00278	0.10502	0.04359	0.00047	0.00133	311.31655	-0.00050
%RSD	55.41243	3.42475	21.61178	0.23213	0.05691	1.05607	292.76085	0.09211	54.88085

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00034	-0.00092	-0.00328	22.16228	10.43995	0.05435	61.87912	0.16434	0.01348
#2	-0.00095	-0.00091	-0.00361	22.18783	10.43489	0.05438	61.91311	0.16410	0.01328
Mean	-0.00065	-0.00092	-0.00344	22.17505	10.43742	0.05436	61.89612	0.16422	0.01338
%RSD	66.34782	0.68895	6.75954	0.08150	0.03428	0.04133	0.03883	0.10103	1.07524

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	116.36274	-0.00050	0.00308	-0.00043	-0.00050	234.21427	-0.00223	0.00308	0.00371
#2	116.29151	-0.00044	0.00285	-0.00071	0.00097	234.31933	-0.00078	0.00014	0.00204
Mean	116.32712	-0.00047	0.00297	-0.00057	0.00024	234.26680	-0.00151	0.00161	0.00288
%RSD	0.04330	8.86200	5.49390	34.09880	439.12264	0.03171	67.84167	128.70340	40.92985

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	6.56235	-0.00050	3.15491	-0.03026	-0.00252	0.00353	0.04125	0.01935	0.00147
#2	6.56963	-0.00157	3.15778	-0.03250	-0.00268	-0.00239	0.02450	0.01897	0.00176
Mean	6.56599	-0.00103	3.15635	-0.03138	-0.00260	0.00057	0.03287	0.01916	0.00161
%RSD	0.07837	73.25482	0.06416	5.05977	4.27347	732.66624	36.03309	1.41471	12.75283

	Zr ppm	Pb calc	Se calc
#1	0.00188	-0.00047	0.00350
#2	0.00155	0.00041	0.00141
Mean	0.00171	-0.00003	0.00246
%RSD	13.30660	1925.95029	60.09546

Method : Paragon File : 111010A  
SampleId1 : 1109372-4 SampleId2 :  
Analysis commenced : 10/10/2011 14:08:52  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:45

[SAMPLE]

Position : TUBE37

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00059	0.04236	0.00284	0.10657	0.04199	0.00052	-0.00094	310.79981	-0.00050
#2	0.00034	0.03877	0.00086	0.10402	0.04185	0.00048	0.00085	311.38025	-0.00060
Mean	-0.00013	0.04056	0.00185	0.10529	0.04192	0.00050	-0.00004	311.09003	-0.00055
%RSD	520.02291	6.25520	75.94133	1.71328	0.23668	5.41241	2982.49898	0.13193	13.69643

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00095	-0.00100	-0.00396	20.32332	10.48204	0.05455	61.91439	0.15472	0.01511
#2	0.00002	-0.00074	-0.00303	20.27673	10.33441	0.05384	61.62972	0.15449	0.01484
<b>Mean</b>	<b>-0.00047</b>	<b>-0.00087</b>	<b>-0.00350</b>	<b>20.30002</b>	<b>10.40822</b>	<b>0.05419</b>	<b>61.77205</b>	<b>0.15460</b>	<b>0.01497</b>
%RSD	147.14057	21.67475	18.93436	0.16227	1.00297	0.93098	0.32586	0.10730	1.28107

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	115.83839	-0.00119	0.00401	-0.00432	0.00121	235.49736	-0.00166	0.00464	0.00653
#2	114.66595	-0.00068	-0.00314	-0.00027	0.00000	234.29759	-0.00188	-0.00040	0.00493
<b>Mean</b>	<b>115.25217</b>	<b>-0.00093</b>	<b>0.00043</b>	<b>-0.00230</b>	<b>0.00061</b>	<b>234.89747</b>	<b>-0.00177</b>	<b>0.00212</b>	<b>0.00573</b>
%RSD	0.71933	38.21201	1171.55070	124.54595	140.60876	0.36116	9.08792	167.81337	19.84056

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	6.59473	-0.00336	3.15011	-0.04197	-0.00268	0.00367	0.04192	0.02302	0.00176
#2	6.55488	-0.00086	3.11715	-0.03294	-0.00265	0.00201	0.04830	0.02378	0.00205
<b>Mean</b>	<b>6.57480</b>	<b>-0.00211</b>	<b>3.13363</b>	<b>-0.03746</b>	<b>-0.00266</b>	<b>0.00284</b>	<b>0.04511</b>	<b>0.02340</b>	<b>0.00190</b>
%RSD	0.42853	83.96264	0.74388	17.04514	0.65801	41.18472	9.99874	2.31915	10.80428

	Zr ppm	Pb calc	Se calc
#1	0.00213	-0.00063	0.00590
#2	0.00198	-0.00009	0.00315
<b>Mean</b>	<b>0.00206</b>	<b>-0.00036</b>	<b>0.00453</b>
%RSD	5.20273	106.51341	42.91548

Method : Paragon File : 111010A  
SampleId1 : 1109372-5 SampleId2 :  
Analysis commenced : 10/10/2011 14:10:42  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:45  
[SAMPLE]  
Position : TUBE38

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00012	0.04293	0.01883	0.05217	0.04933	0.00052	0.00167	170.45307	-0.00037
#2	-0.00012	0.04217	0.01835	0.05272	0.04992	0.00050	-0.00352	171.08030	0.00008
<b>Mean</b>	<b>-0.00012</b>	<b>0.04255</b>	<b>0.01859</b>	<b>0.05245</b>	<b>0.04962</b>	<b>0.00051</b>	<b>-0.00092</b>	<b>170.76669</b>	<b>-0.00014</b>
%RSD	0.80359	1.26992	1.79894	0.74354	0.84988	2.75436	397.75270	0.25972	225.05521

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.00045	-0.00045	-0.00262	6.17921	8.86746	0.04032	39.32689	0.83688	0.03763
#2	0.00088	-0.00089	-0.00237	6.20350	8.93741	0.04067	39.54370	0.83972	0.03858
<b>Mean</b>	<b>0.00067</b>	<b>-0.00067</b>	<b>-0.00249</b>	<b>6.19136</b>	<b>8.90243</b>	<b>0.04049</b>	<b>39.43530</b>	<b>0.83830</b>	<b>0.03810</b>
%RSD	45.20737	45.67424	7.21156	0.27740	0.55566	0.61544	0.38877	0.23994	1.76234

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
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#1	104.67923	-0.00107	-0.00130	-0.00013	-0.00114	116.58423	-0.00180	0.00420	-0.00316
#2	105.46024	-0.00006	-0.00291	-0.00165	0.00051	116.95888	0.00110	-0.00107	-0.00424
<b>Mean</b>	<b>105.06974</b>	<b>-0.00056</b>	<b>-0.00211</b>	<b>-0.00089</b>	<b>-0.00032</b>	<b>116.77155</b>	<b>-0.00035</b>	<b>0.00156</b>	<b>-0.00370</b>
%RSD	0.52561	126.81412	54.21908	120.20532	370.78795	0.22687	582.69224	238.06744	20.72001

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.45615	0.00022	2.25905	-0.03032	-0.00223	0.00374	0.07637	0.01452	0.00292
#2	3.49008	0.00308	2.27469	-0.02823	-0.00237	0.00694	0.07924	0.01502	0.00205
<b>Mean</b>	<b>3.47311</b>	<b>0.00165</b>	<b>2.26687</b>	<b>-0.02928</b>	<b>-0.00230</b>	<b>0.00534</b>	<b>0.07780</b>	<b>0.01477</b>	<b>0.00248</b>
%RSD	0.69076	122.88287	0.48778	5.06941	4.31811	42.35317	2.60724	2.38784	24.82626

	Zr ppm	Pb calc	Se calc
#1	0.00204	-0.00081	-0.00071
#2	0.00189	-0.00021	-0.00319
<b>Mean</b>	<b>0.00196</b>	<b>-0.00051</b>	<b>-0.00195</b>
%RSD	5.47706	83.71456	89.92608

Method : Paragon File : 111010A  
SampleId1 : 1109372-6 SampleId2 :  
Analysis commenced : 10/10/2011 14:12:31  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:45

[SAMPLE]

Position : TUBE39

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00004	0.05259	-0.00718	0.10581	0.04785	0.00065	-0.00126	371.48570	-0.00031
#2	-0.00064	0.05372	-0.00359	0.10471	0.04803	0.00065	0.00264	370.97196	-0.00016
<b>Mean</b>	<b>-0.00030</b>	<b>0.05315</b>	<b>-0.00538</b>	<b>0.10526</b>	<b>0.04794</b>	<b>0.00065</b>	<b>0.00069</b>	<b>371.22883</b>	<b>-0.00023</b>
%RSD	161.98709	1.50497	47.18370	0.74112	0.25874	0.14504	399.37842	0.09786	44.34539

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00064	-0.00084	-0.00294	24.17277	10.42891	0.05451	61.36336	0.18303	0.01355
#2	-0.00076	-0.00119	-0.00328	24.24436	10.52413	0.05501	61.65606	0.18327	0.01504
<b>Mean</b>	<b>-0.00070</b>	<b>-0.00102</b>	<b>-0.00311</b>	<b>24.20857</b>	<b>10.47652</b>	<b>0.05476</b>	<b>61.50971</b>	<b>0.18315</b>	<b>0.01430</b>
%RSD	12.21632	24.19877	7.70229	0.20912	0.64263	0.65278	0.33649	0.09061	7.38014

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	114.66548	-0.00024	-0.00937	0.00139	0.00146	246.85223	0.00267	-0.00018	-0.00075
#2	115.18599	-0.00104	-0.01144	-0.00092	-0.00037	248.46965	-0.00455	-0.00109	0.00377
<b>Mean</b>	<b>114.92573</b>	<b>-0.00064</b>	<b>-0.01041</b>	<b>0.00023</b>	<b>0.00055</b>	<b>247.66094</b>	<b>-0.00094</b>	<b>-0.00063</b>	<b>0.00151</b>
%RSD	0.32025	88.97253	14.10124	698.71167	237.59855	0.46180	542.49542	101.14889	211.73252

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	7.22331	0.00165	3.49341	-0.03296	-0.00274	0.00019	0.04911	0.02260	0.00292

#2	7.26894	-0.00050	3.51749	-0.03238	-0.00278	0.00176	0.04502	0.02275	0.00466
<b>Mean</b>	<b>7.24613</b>	<b>0.00057</b>	<b>3.50545</b>	<b>-0.03267</b>	<b>-0.00276</b>	<b>0.00097</b>	<b>0.04707</b>	<b>0.02268</b>	<b>0.00379</b>
%RSD	0.44531	264.29542	0.48567	1.25188	1.05733	114.42047	6.14148	0.48353	32.52417

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.00188	0.00144	-0.00056
#2	0.00171	-0.00055	0.00215
<b>Mean</b>	<b>0.00179</b>	<b>0.00044</b>	<b>0.00080</b>
%RSD	6.83225	318.95175	241.13908

Method : Paragon File : 111010A  
**SampleId1 : 1110028-1** **SampleId2 :**  
**Analysis commenced : 10/10/2011 14:14:21**  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:45  
**[SAMPLE]**

Position : TUBE40

Final concentrations

	<b>Ag</b> ppm	<b>Al</b> ppm	<b>As</b> ppm	<b>B</b> ppm	<b>Ba</b> ppm	<b>Be</b> ppm	<b>Bi</b> ppm	<b>Ca</b> ppm	<b>Cd</b> ppm
#1	-0.00054	0.05240	-0.00141	0.00599	0.26191	0.00051	-0.00581	57.50874	-0.00043
#2	-0.00088	0.05650	0.00152	0.00544	0.26065	0.00046	-0.00111	57.99517	-0.00068
<b>Mean</b>	<b>-0.00071</b>	<b>0.05445</b>	<b>0.00005</b>	<b>0.00571</b>	<b>0.26128</b>	<b>0.00048</b>	<b>-0.00346</b>	<b>57.75195</b>	<b>-0.00055</b>
%RSD	33.68926	5.32592	3957.93304	6.82613	0.34286	7.74574	96.16042	0.59558	30.99356

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	-0.00064	-0.00097	-0.00238	0.01543	0.72932	0.00481	10.21179	-0.00001	-0.00184
#2	-0.00028	-0.00019	-0.00221	0.02364	0.74176	0.00484	10.21137	0.00030	-0.00117
<b>Mean</b>	<b>-0.00046</b>	<b>-0.00058</b>	<b>-0.00229</b>	<b>0.01954</b>	<b>0.73554</b>	<b>0.00482</b>	<b>10.21158</b>	<b>0.00014</b>	<b>-0.00151</b>
%RSD	54.99532	95.48895	5.33034	29.68665	1.19578	0.38117	0.00287	154.43280	31.84717

	<b>Na</b> ppm	<b>Ni</b> ppm	<b>P</b> ppm	<b>Pb I</b> ppm	<b>Pb II</b> ppm	<b>S</b> ppm	<b>Sb</b> ppm	<b>Se I</b> ppm	<b>Se II</b> ppm
#1	10.87156	-0.00116	-0.00268	-0.00084	-0.00295	7.41323	-0.00302	0.00227	-0.00165
#2	10.82891	-0.00003	-0.00245	0.00112	-0.00242	7.54255	-0.00058	0.01000	-0.00128
<b>Mean</b>	<b>10.85024</b>	<b>-0.00059</b>	<b>-0.00257</b>	<b>0.00014</b>	<b>-0.00269</b>	<b>7.47789</b>	<b>-0.00180</b>	<b>0.00614</b>	<b>-0.00146</b>
%RSD	0.27798	134.63191	6.35362	986.11229	14.00957	1.22281	95.93403	89.06321	17.63213

	<b>Si</b> ppm	<b>Sn</b> ppm	<b>Sr</b> ppm	<b>Th</b> ppm	<b>Ti</b> ppm	<b>Tl</b> ppm	<b>U</b> ppm	<b>V</b> ppm	<b>Zn</b> ppm
#1	4.27782	-0.00050	0.36155	-0.01098	-0.00181	-0.00166	-0.01465	-0.00058	0.00408
#2	4.27330	0.00307	0.36182	-0.00508	-0.00136	-0.00293	-0.01696	0.00002	0.00437
<b>Mean</b>	<b>4.27556</b>	<b>0.00129</b>	<b>0.36168</b>	<b>-0.00803</b>	<b>-0.00159</b>	<b>-0.00230</b>	<b>-0.01580</b>	<b>-0.00028</b>	<b>0.00423</b>
%RSD	0.07482	196.31377	0.05312	51.93460	19.89970	39.17352	10.35260	153.63806	4.86167

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.00045	-0.00225	-0.00034
#2	0.00010	-0.00124	0.00248

Mean 0.00028 -0.00175 0.00107UNDGREEN  
 %RSD 90.33553 40.85325 186.62752

Method : Paragon File : 111010A  
 SampleId1 : CCV SampleId2 :  
 Analysis commenced : 10/10/2011 14:18:11  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:46  
 [CV]

Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19493	52.54329	0.51729	1.01954	0.98829	0.47932	0.53454	51.67232	0.51804
#2	0.19529	52.39005	0.51624	1.01490	0.98594	0.47859	0.52965	51.53190	0.51484
Mean	0.19511	52.46667	0.51677	1.01722	0.98712	0.47895	0.53209	51.60211	0.51644
%RSD	0.13037	0.20652	0.14312	0.32223	0.16810	0.10771	0.65026	0.19242	0.43882

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.48353	0.95781	1.04242	20.34619	49.58030	0.49487	51.10387	0.95336	0.98807
#2	0.48104	0.95454	1.03678	20.30439	49.36692	0.49283	50.99695	0.95162	0.98486
Mean	0.48228	0.95617	1.03960	20.32529	49.47361	0.49385	51.05041	0.95249	0.98647
%RSD	0.36577	0.24183	0.38393	0.14543	0.30498	0.29196	0.14810	0.12927	0.23000

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	48.72412	1.01869	5.16112	0.98253	0.96762	5.08881	0.50342	1.00701	0.98779
#2	48.53514	1.01603	5.10196	0.98250	0.96776	5.15916	0.49797	1.00836	0.98991
Mean	48.62963	1.01736	5.13154	0.98251	0.96769	5.12398	0.50069	1.00769	0.98885
%RSD	0.27479	0.18458	0.81522	0.00230	0.01039	0.97077	0.76939	0.09464	0.15177

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.82499	1.07415	0.49594	0.34848	0.46054	0.53649	4.79404	0.48072	0.96178
#2	4.81172	1.07092	0.49457	0.34700	0.45977	0.53947	4.77787	0.47968	0.96090
Mean	4.81835	1.07253	0.49525	0.34774	0.46016	0.53798	4.78596	0.48020	0.96134
%RSD	0.19467	0.21275	0.19607	0.30198	0.11832	0.39081	0.23896	0.15237	0.06453

	Zr ppm	Pb calc	Se calc
#1	0.99691	0.97258	0.99419
#2	0.99587	0.97267	0.99605
Mean	0.99639	0.97262	0.99512
%RSD	0.07410	0.00612	0.13251

Method : Paragon File : 111010A  
 SampleId1 : CCB SampleId2 :  
 Analysis commenced : 10/10/2011 14:20:06  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:46  
 [CB]

Position : STD2

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00043	0.12013	0.00086	-0.00118	0.00005	0.00094	0.00019	0.08649	0.00001
#2	0.00033	0.11193	-0.00208	-0.00097	0.00001	0.00087	0.00019	0.07427	0.00022
Mean	0.00038	0.11603	-0.00061	-0.00108	0.00003	0.00090	0.00019	0.08038	0.00012
%RSD	19.01095	4.99407	340.05071	13.57337	76.96384	5.16401	0.71974	10.75209	124.08068

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00022	0.00056	-0.00195	0.02135	-0.04519	0.00399	0.04299	0.00038	-0.00042
#2	0.00020	0.00037	-0.00187	0.01969	-0.03977	0.00397	0.03352	0.00014	-0.00015
Mean	-0.00001	0.00047	-0.00191	0.02052	-0.04248	0.00398	0.03825	0.00026	-0.00029
%RSD	2477.47697	29.00507	2.99420	5.72359	9.02325	0.30787	17.50655	63.67486	67.29510

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.01112	-0.00122	0.00447	0.00259	-0.00119	0.01267	-0.00025	-0.00030	0.00308
#2	-0.01559	0.00036	0.00078	0.00177	-0.00034	0.02432	0.00165	0.00519	0.00024
Mean	-0.01336	-0.00043	0.00262	0.00218	-0.00076	0.01849	0.00070	0.00244	0.00166
%RSD	23.62068	259.20816	99.49754	26.38474	77.82325	44.56412	191.37491	158.96331	120.67403

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.01946	0.00129	-0.00206	0.00232	-0.00144	0.00235	-0.01119	0.00002	0.00059
#2	-0.01765	0.00129	-0.00224	0.00179	-0.00131	0.00080	-0.00542	0.00034	0.00059
Mean	-0.01856	0.00129	-0.00215	0.00205	-0.00138	0.00158	-0.00830	0.00018	0.00059
%RSD	6.90847	0.00792	5.99834	18.11580	6.37489	69.31019	49.15481	123.19393	0.00000

	Zr ppm	Pb calc	Se calc
#1	0.00174	0.00007	0.00195
#2	0.00164	0.00036	0.00189
Mean	0.00169	0.00022	0.00192
%RSD	3.95774	95.04260	2.20490

Method : Paragon File : 111010A  
SampleId1 : 1110028-2 SampleId2 :  
Analysis commenced : 10/10/2011 14:21:49  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:46  
[SAMPLE]  
Position : TUBE41

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00049	0.13357	-0.00066	0.00516	0.11131	0.00049	-0.00120	15.94688	-0.00025
#2	0.00013	0.13190	-0.00312	0.00571	0.11079	0.00045	-0.00217	15.99135	0.00008
Mean	-0.00018	0.13274	-0.00189	0.00544	0.11105	0.00047	-0.00168	15.96912	-0.00009
%RSD	246.97693	0.89015	92.17087	7.17232	0.33540	5.17911	40.74415	0.19690	265.52582

ted: 10/11/2011 11:38:21 User: MIKE LUNDGREEN

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00056	-0.00005	0.02431	0.14818	0.60563	0.00847	1.36240	0.45822	-0.00103
#2	-0.00007	-0.00014	0.02387	0.14974	0.61512	0.00845	1.36240	0.45845	-0.00062
<b>Mean</b>	<b>-0.00031</b>	<b>-0.00009</b>	<b>0.02409</b>	<b>0.14896</b>	<b>0.61037</b>	<b>0.00846</b>	<b>1.36240</b>	<b>0.45833</b>	<b>-0.00083</b>
%RSD	109.05172	66.46569	1.28934	0.74000	1.10015	0.12072	0.00000	0.03636	34.76705

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	73.16250	-0.00169	-0.00061	-0.00185	0.00094	20.38005	-0.00080	0.00427	0.00114
#2	72.63420	0.00018	0.00055	0.00182	0.00012	20.26972	-0.00069	0.00002	-0.00329
<b>Mean</b>	<b>72.89835</b>	<b>-0.00076</b>	<b>-0.00003</b>	<b>-0.00001</b>	<b>0.00053</b>	<b>20.32488</b>	<b>-0.00074</b>	<b>0.00214</b>	<b>-0.00107</b>
%RSD	0.51245	174.98421	2738.42582	18026.82177	110.29431	0.38385	10.97958	140.09515	291.75216

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.13138	0.00307	0.36124	-0.00088	-0.00051	0.00284	-0.02339	-0.00034	0.01077
#2	3.11887	-0.00300	0.35959	0.00409	-0.00015	0.00194	-0.00839	-0.00020	0.01048
<b>Mean</b>	<b>3.12513</b>	<b>0.00003</b>	<b>0.36042</b>	<b>0.00160</b>	<b>-0.00033</b>	<b>0.00239</b>	<b>-0.01589</b>	<b>-0.00027</b>	<b>0.01062</b>
%RSD	0.28303	12349.73895	0.32365	219.32724	78.01459	26.66329	66.75250	37.12929	1.93498

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00194	0.00001	0.00218
#2	0.00139	0.00068	-0.00219
<b>Mean</b>	<b>0.00166</b>	<b>0.00035</b>	<b>0.00000</b>
%RSD	23.27135	136.722851177	10.36143

Method : Paragon File : 111010A  
SampleId1 : 1110028-4 SampleId2 :  
Analysis commenced : 10/10/2011 14:23:41  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:46

[SAMPLE]

Position : TUBE42

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00094	0.08278	-0.00085	0.03535	0.45475	0.00048	-0.00224	2.25492	-0.00073
#2	-0.00083	0.08174	-0.00198	0.03459	0.45630	0.00049	-0.00435	2.25205	0.00002
<b>Mean</b>	<b>-0.00089</b>	<b>0.08226</b>	<b>-0.00141</b>	<b>0.03497</b>	<b>0.45553</b>	<b>0.00049</b>	<b>-0.00329</b>	<b>2.25349</b>	<b>-0.00036</b>
%RSD	8.37694	0.89716	56.77146	1.53313	0.24103	0.85117	45.33600	0.09005	148.12238

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00080	-0.00032	-0.00075	2.26377	3.54166	0.03971	0.56397	0.03495	-0.00056
#2	-0.00013	0.00052	-0.00100	2.26948	3.55688	0.03980	0.57344	0.03518	-0.00144
<b>Mean</b>	<b>-0.00047</b>	<b>0.00010</b>	<b>-0.00088</b>	<b>2.26663</b>	<b>3.54927</b>	<b>0.03976</b>	<b>0.56871</b>	<b>0.03506</b>	<b>-0.00100</b>
%RSD	101.32973	610.61015	20.21215	0.17807	0.30336	0.16442	1.17792	0.47223	62.52024

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	330.59342	-0.00110	0.09328	-0.00328	0.00166	0.05637	-0.00180	-0.00080	0.00004
#2	329.29496	0.00009	0.07920	-0.00057	-0.00109	0.04180	-0.00237	0.00346	-0.00119
<b>Mean</b>	<b>329.94419</b>	<b>-0.00050</b>	<b>0.08624</b>	<b>-0.00192</b>	<b>0.00028</b>	<b>0.04909</b>	<b>-0.00208</b>	<b>0.00133</b>	<b>-0.00057</b>
%RSD	0.27827	166.78861	11.53997	99.87685	683.10796	20.98681	19.43154	226.15348	152.39281

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	6.25623	-0.00229	0.29468	-0.00309	-0.00059	0.00411	-0.01791	-0.00053	0.00408
#2	6.28199	0.00021	0.29545	0.00034	-0.00066	0.00847	-0.02541	-0.00042	0.00263
<b>Mean</b>	<b>6.26911</b>	<b>-0.00104</b>	<b>0.29506</b>	<b>-0.00138</b>	<b>-0.00062</b>	<b>0.00629</b>	<b>-0.02166</b>	<b>-0.00048</b>	<b>0.00336</b>
%RSD	0.29053	170.58447	0.18571	176.27783	8.44243	49.09836	24.50037	15.87216	30.62497

	Zr ppm	Pb calc	Se calc
#1	0.00157	0.00001	-0.00024
#2	0.00115	-0.00091	0.00036
<b>Mean</b>	<b>0.00136</b>	<b>-0.00045</b>	<b>0.00006</b>
%RSD	21.96317	145.34134	688.96770

Method : Paragon File : 111010A  
SampleId1 : 1110028-5 SampleId2 :  
Analysis commenced : 10/10/2011 14:25:35  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:46

[SAMPLE]

Position : TUBE43

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00025	0.05402	-0.00018	0.20264	0.04771	0.00044	-0.00321	3.11672	-0.00066
#2	-0.00005	0.05592	-0.00141	0.20319	0.04789	0.00042	-0.00012	3.11098	-0.00023
<b>Mean</b>	<b>-0.00015</b>	<b>0.05497</b>	<b>-0.00080</b>	<b>0.20291</b>	<b>0.04780</b>	<b>0.00043</b>	<b>-0.00167</b>	<b>3.11385</b>	<b>-0.00045</b>
%RSD	90.44645	2.44050	108.83326	0.19230	0.25950	2.43902	131.01340	0.13051	69.35484

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00034	0.00170	0.00130	3.29087	0.51813	0.06354	0.01911	0.04236	-0.00212
#2	-0.00004	0.00132	0.00121	3.29673	0.51429	0.06404	0.02240	0.04244	-0.00184
<b>Mean</b>	<b>-0.00019</b>	<b>0.00151</b>	<b>0.00125</b>	<b>3.29380</b>	<b>0.51621</b>	<b>0.06379</b>	<b>0.02075</b>	<b>0.04240</b>	<b>-0.00198</b>
%RSD	114.26785	17.90431	5.17781	0.12581	0.52644	0.55074	11.22394	0.13019	9.68533

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	202.04968	0.00054	-0.00061	0.00147	-0.00038	0.12340	-0.00194	0.00099	-0.00382
#2	202.54583	0.00092	0.00378	-0.00290	-0.00177	0.13214	-0.00138	0.00133	-0.00069
<b>Mean</b>	<b>202.29775</b>	<b>0.00073</b>	<b>0.00158</b>	<b>-0.00072</b>	<b>-0.00108</b>	<b>0.12777</b>	<b>-0.00166</b>	<b>0.00116</b>	<b>-0.00225</b>
%RSD	0.17342	37.45604	195.53472	430.83873	90.91185	4.83837	23.94600	20.84680	98.05662

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	9.85678	-0.00407	0.25301	0.00123	-0.00153	0.00836	-0.01630	-0.00044	0.00408
#2	9.90400	-0.00336	0.25422	-0.00021	-0.00138	0.00500	-0.00822	-0.00058	0.00321
<b>Mean</b>	<b>9.88039</b>	<b>-0.00372</b>	<b>0.25361</b>	<b>0.00051</b>	<b>-0.00145</b>	<b>0.00668</b>	<b>-0.01226</b>	<b>-0.00051</b>	<b>0.00365</b>
%RSD	0.33791	13.59609	0.33721	198.27299	7.23667	35.57915	46.56118	19.53288	16.91025

	Zr ppm	Pb calc	Se calc
#1	-0.00049	0.00023	-0.00222
#2	-0.00065	-0.00215	-0.00002
<b>Mean</b>	<b>-0.00057</b>	<b>-0.00096</b>	<b>-0.00112</b>
%RSD	19.88361	175.79584	139.19206

Method : Paragon File : 111010A  
SampleId1 : 1110028-7 SampleId2 :  
Analysis commenced : 10/10/2011 14:27:25  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:46

[SAMPLE]

Position : TUBE44

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00064	0.04645	-0.00179	0.00819	0.02586	0.00039	-0.00436	54.46042	-0.00045
#2	-0.00010	0.04720	-0.00179	0.00847	0.02579	0.00037	-0.00338	54.41634	-0.00038
<b>Mean</b>	<b>-0.00037</b>	<b>0.04683</b>	<b>-0.00179</b>	<b>0.00833</b>	<b>0.02582</b>	<b>0.00038</b>	<b>-0.00387</b>	<b>54.43838</b>	<b>-0.00041</b>
%RSD	104.18768	1.13264	0.00000	2.34007	0.19208	4.23943	17.77317	0.05726	11.73976

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00116	-0.00084	-0.00340	0.16679	0.97678	0.01485	4.31097	0.25685	-0.00157
#2	-0.00061	-0.00054	-0.00340	0.16648	0.97769	0.01486	4.30519	0.25693	-0.00110
<b>Mean</b>	<b>-0.00088</b>	<b>-0.00069</b>	<b>-0.00340</b>	<b>0.16663</b>	<b>0.97724</b>	<b>0.01486</b>	<b>4.30808</b>	<b>0.25689</b>	<b>-0.00134</b>
%RSD	43.60018	30.74193	0.04657	0.13233	0.06548	0.02750	0.09483	0.02156	25.12166

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	38.27136	-0.00119	-0.01214	-0.00228	0.00058	32.41190	-0.00391	-0.00604	-0.00263
#2	38.44647	-0.00175	-0.00360	-0.00267	-0.00027	32.51464	-0.00180	0.00102	-0.00307
<b>Mean</b>	<b>38.35892</b>	<b>-0.00147</b>	<b>-0.00787</b>	<b>-0.00248</b>	<b>0.00015</b>	<b>32.46327</b>	<b>-0.00286</b>	<b>-0.00251</b>	<b>-0.00285</b>
%RSD	0.32280	27.16436	76.65747	11.08424	389.44652	0.22380	52.34589	198.63795	10.81392

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.99350	0.00057	1.15232	-0.00417	-0.00176	0.00837	-0.01821	-0.00080	0.00147
#2	4.00795	-0.00193	1.15446	-0.00340	-0.00172	0.00400	-0.02110	-0.00058	0.00234
<b>Mean</b>	<b>4.00072</b>	<b>-0.00068</b>	<b>1.15339</b>	<b>-0.00379</b>	<b>-0.00174</b>	<b>0.00618</b>	<b>-0.01965</b>	<b>-0.00069</b>	<b>0.00190</b>
%RSD	0.25542	260.77799	0.13063	14.33567	1.68054	49.99910	10.37933	21.70963	32.41283

	Zr ppm	Pb calc	Se calc
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#1	-0.00014	-0.00038	-0.00377	UNDGREEN
#2	0.00004	-0.00107	-0.00171	
Mean	-0.00005	-0.00072	-0.00274	
%RSD	262.16203	67.78617	53.19129	

Method : Paragon File : 111010A  
SampleId1 : 1110028-8 SampleId2 :  
Analysis commenced : 10/10/2011 14:29:15  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:47  
[SAMPLE]

Position : TUBE45

Final concentrations

	<b>Ag</b> ppm	<b>Al</b> ppm	<b>As</b> ppm	<b>B</b> ppm	<b>Ba</b> ppm	<b>Be</b> ppm	<b>Bi</b> ppm	<b>Ca</b> ppm	<b>Cd</b> ppm
#1	0.00058	0.11796	-0.00085	0.01226	0.04319	0.00042	-0.00106	45.40727	-0.00057
#2	0.00009	0.11796	-0.00236	0.01116	0.04333	0.00041	0.00088	45.34679	-0.00080
Mean	0.00034	0.11796	-0.00160	0.01171	0.04326	0.00041	-0.00009	45.37703	-0.00069
%RSD	103.08303	0.00078	66.76171	6.66030	0.22939	2.51035	1532.78078	0.09424	23.58174

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	-0.00083	0.00000	0.01370	0.17136	0.89172	0.00469	12.37020	0.00264	-0.00205
#2	-0.00035	-0.00027	0.01361	0.17115	0.89330	0.00467	12.36978	0.00264	-0.00151
Mean	-0.00059	-0.00014	0.01366	0.17126	0.89251	0.00468	12.36999	0.00264	-0.00178
%RSD	58.26607	140.27569	0.44285	0.08584	0.12546	0.34917	0.00237	0.00000	21.58843

	<b>Na</b> ppm	<b>Ni</b> ppm	<b>P</b> ppm	<b>Pb I</b> ppm	<b>Pb II</b> ppm	<b>S</b> ppm	<b>Sb</b> ppm	<b>Se I</b> ppm	<b>Se II</b> ppm
#1	23.05848	-0.00113	-0.00522	0.00378	-0.00006	21.05725	0.00086	-0.00447	-0.00241
#2	23.11332	-0.00128	-0.00383	0.00276	-0.00016	21.11097	0.00009	0.00427	-0.00023
Mean	23.08590	-0.00120	-0.00453	0.00327	-0.00011	21.08411	0.00047	-0.00010	-0.00132
%RSD	0.16795	8.73872	21.61374	22.24574	67.37524	0.18016	115.68724	6238.08984	116.40957

	<b>Si</b> ppm	<b>Sn</b> ppm	<b>Sr</b> ppm	<b>Th</b> ppm	<b>Ti</b> ppm	<b>Tl</b> ppm	<b>U</b> ppm	<b>V</b> ppm	<b>Zn</b> ppm
#1	4.18087	0.00093	0.51407	-0.01232	-0.00092	0.00068	-0.01417	0.00002	0.02646
#2	4.17883	0.00307	0.51691	-0.01611	-0.00099	0.00441	-0.01417	-0.00023	0.02733
Mean	4.17985	0.00200	0.51549	-0.01422	-0.00095	0.00255	-0.01417	-0.00011	0.02690
%RSD	0.03462	75.77369	0.38898	18.85586	5.51562	103.62744	0.00071	164.38057	2.29242

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.00054	0.00122	-0.00310
#2	0.00088	0.00081	0.00127
Mean	0.00071	0.00102	-0.00092
%RSD	33.31255	28.76609	336.91640

Method : Paragon File : 111010A  
SampleId1 : 1110035-1 SampleId2 :  
Analysis commenced : 10/10/2011 14:31:04

Printed : 10/11/2011 11:37:47  
[SAMPLE]

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : TUBE46

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00045	0.08569	0.00038	0.01088	0.03491	0.00046	-0.00191	4.11490	-0.00034
#2	-0.00097	0.09008	-0.00359	0.01102	0.03522	0.00046	-0.00013	4.11411	-0.00035
Mean	-0.00071	0.08789	-0.00160	0.01095	0.03507	0.00046	-0.00102	4.11451	-0.00035
%RSD	51.83000	3.53316	175.25147	0.89018	0.63661	1.03052	123.61173	0.01349	1.45338
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.00007	-0.00009	0.00052	0.02488	0.64429	0.00786	0.22830	0.01996	-0.00049
#2	-0.00078	-0.00059	0.00062	0.02488	0.63773	0.00787	0.22213	0.01988	-0.00103
Mean	-0.00036	-0.00034	0.00057	0.02488	0.64101	0.00787	0.22521	0.01992	-0.00076
%RSD	167.61216	104.65428	12.75452	0.00000	0.72336	0.07789	1.93952	0.27698	50.49391
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	104.04330	-0.00047	0.00931	0.00108	-0.00049	18.41697	-0.00269	-0.00534	-0.00092
#2	104.62974	-0.00208	0.00862	0.00005	0.00108	18.54493	-0.00224	-0.00424	-0.00114
Mean	104.33652	-0.00128	0.00896	0.00056	0.00030	18.48095	-0.00247	-0.00479	-0.00103
%RSD	0.39744	88.88581	5.45750	129.83954	374.32850	0.48959	12.77698	16.27844	14.98887
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.69069	-0.00122	0.08886	0.00083	-0.00100	0.00345	-0.00311	0.00045	0.00466
#2	4.72223	-0.00193	0.08966	-0.00069	-0.00109	-0.00403	-0.02562	-0.00026	0.00437
Mean	4.70646	-0.00157	0.08926	0.00007	-0.00104	-0.00029	-0.01436	0.00009	0.00452
%RSD	0.47395	32.13368	0.63335	1508.44394	6.15455	1835.96107	110.78157	526.80132	4.54892
	Zr ppm	Pb calc	Se calc						
#1	-0.00019	0.00003	-0.00239						
#2	-0.00052	0.00074	-0.00217						
Mean	-0.00036	0.00039	-0.00228						
%RSD	64.82374	129.41736	6.88579						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:47

SampleId1 : 1110035-4

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 14:32:54

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : TUBE47

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00010	0.08292	-0.00406	0.00358	0.04564	0.00046	-0.00306	8.38300	-0.00023
#2	-0.00117	0.08334	-0.00179	0.00351	0.04613	0.00046	-0.00144	8.37747	-0.00050

<b>Mean</b>	<b>-0.00053</b>	<b>0.08313</b>	<b>-0.00293</b>	<b>0.00354</b>	<b>0.04589</b>	<b>0.00046</b>	<b>-0.00225</b>	<b>8.38024</b>	<b>-0.00036</b>
<b>%RSD</b>	168.79053	0.35858	54.83803	1.37647	0.75685	0.61706	51.05675	0.04666	53.20424
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00101	-0.00091	-0.00314	0.04555	0.44828	0.00725	1.16997	0.02519	0.00995
#2	-0.00071	-0.00110	-0.00297	0.04544	0.44511	0.00728	1.17203	0.02519	0.01036
<b>Mean</b>	<b>-0.00086</b>	<b>-0.00101</b>	<b>-0.00305</b>	<b>0.04549</b>	<b>0.44670</b>	<b>0.00727</b>	<b>1.17100</b>	<b>0.02519</b>	<b>0.01016</b>
<b>%RSD</b>	25.04276	13.27303	3.96022	0.16140	0.50095	0.28103	0.12440	0.00000	2.83236
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	82.60043	-0.00244	-0.00337	-0.00042	-0.00053	21.24528	-0.00292	-0.00682	-0.00011
#2	83.46411	-0.00172	-0.00199	-0.00289	0.00275	21.41544	-0.00247	-0.00536	-0.00346
<b>Mean</b>	<b>83.03227</b>	<b>-0.00208</b>	<b>-0.00268</b>	<b>-0.00165</b>	<b>0.00111</b>	<b>21.33036</b>	<b>-0.00270</b>	<b>-0.00609</b>	<b>-0.00179</b>
<b>%RSD</b>	0.73551	24.25806	36.48265	105.57123	209.06411	0.56409	11.79558	16.91493	132.38282
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.02357	0.00272	0.15649	0.00184	-0.00121	0.00372	-0.02678	-0.00029	0.00118
#2	3.04575	-0.00300	0.15774	-0.00212	-0.00117	0.00509	-0.02678	-0.00071	0.00147
<b>Mean</b>	<b>3.03466</b>	<b>-0.00014</b>	<b>0.15712</b>	<b>-0.00014</b>	<b>-0.00119</b>	<b>0.00440</b>	<b>-0.02678</b>	<b>-0.00050</b>	<b>0.00132</b>
<b>%RSD</b>	0.51668	2829.41096	0.56460	2005.08322	1.96581	21.93369	0.00019	59.74861	15.55889
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00010	-0.00049	-0.00235						
#2	-0.00018	0.00087	-0.00409						
<b>Mean</b>	<b>-0.00004</b>	<b>0.00019</b>	<b>-0.00322</b>						
<b>%RSD</b>	503.48153	508.08336	38.31308						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:47

SampleId1 : 1110035-5

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 14:34:44

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE48

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00000	0.18133	0.00161	0.12670	0.05378	0.00057	-0.00727	9.03554	-0.00075
#2	-0.00025	0.18093	0.00123	0.12698	0.05413	0.00058	-0.00581	9.04635	-0.00021
<b>Mean</b>	<b>-0.00012</b>	<b>0.18113</b>	<b>0.00142</b>	<b>0.12684</b>	<b>0.05396</b>	<b>0.00057</b>	<b>-0.00654</b>	<b>9.04095</b>	<b>-0.00048</b>
<b>%RSD</b>	141.54032	0.15577	18.78904	0.15377	0.45981	1.28786	15.77876	0.08452	79.01756
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00088	-0.00089	-0.00221	0.15296	2.02371	0.04384	5.59119	0.00225	-0.00110
#2	-0.00039	-0.00054	-0.00246	0.15421	2.02484	0.04389	5.61019	0.00241	-0.00171
<b>Mean</b>	<b>-0.00064</b>	<b>-0.00071</b>	<b>-0.00233</b>	<b>0.15359</b>	<b>2.02427</b>	<b>0.04386</b>	<b>5.60069</b>	<b>0.00233</b>	<b>-0.00140</b>

%RSD	53.91481	34.68614	7.78505	0.57420	0.03959	0.08848	0.23985	4.74076	30.73915
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	247.11642	-0.00128	-0.00407	-0.00083	0.00105	1.58171	-0.00291	0.00214	0.00100
#2	245.40214	-0.00134	-0.00752	-0.00074	-0.00111	1.58171	-0.00180	-0.00268	-0.00278
<b>Mean</b>	<b>246.25928</b>	<b>-0.00131</b>	<b>-0.00580</b>	<b>-0.00078</b>	<b>-0.00003</b>	<b>1.58171</b>	<b>-0.00236</b>	<b>-0.00027</b>	<b>-0.00089</b>
%RSD	0.49224	3.21717	42.20775	8.67608	4952.89080	0.00000	33.12144	1272.68327	299.62935
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	6.22734	-0.00122	0.27131	-0.00245	0.00027	0.00550	-0.01762	0.00072	0.00176
#2	6.24216	-0.00336	0.27134	-0.00583	0.00014	0.00176	-0.01705	0.00068	0.00205
<b>Mean</b>	<b>6.23475</b>	<b>-0.00229</b>	<b>0.27133</b>	<b>-0.00414</b>	<b>0.00021</b>	<b>0.00363</b>	<b>-0.01734</b>	<b>0.00070</b>	<b>0.00190</b>
%RSD	0.16806	66.24030	0.00757	57.60843	45.03974	72.69266	2.35001	3.53051	10.80428
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	-0.00023	0.00042	0.00138						
#2	0.00021	-0.00098	-0.00275						
<b>Mean</b>	<b>-0.00001</b>	<b>-0.00028</b>	<b>-0.00068</b>						
%RSD	2940.99806	352.99516	426.49810						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:47

SampleId1 : 1110035-7

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 14:36:34

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE49

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00073	0.07057	-0.00312	0.00964	0.26030	0.00061	-0.00619	36.95532	-0.00052
#2	-0.00044	0.06106	0.00105	0.00854	0.26061	0.00058	0.00015	36.88648	-0.00048
<b>Mean</b>	<b>-0.00059</b>	<b>0.06581</b>	<b>-0.00104</b>	<b>0.00909</b>	<b>0.26045</b>	<b>0.00059</b>	<b>-0.00302</b>	<b>36.92090</b>	<b>-0.00050</b>
%RSD	35.30039	10.21803	284.23535	8.57949	0.08599	3.17309	148.26134	0.13184	5.62664
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00107	-0.00094	0.04168	0.00163	1.12274	0.00824	6.34710	-0.00040	-0.00327
#2	-0.00089	-0.00111	0.04193	0.00142	1.11572	0.00823	6.34586	-0.00033	-0.00144
<b>Mean</b>	<b>-0.00098</b>	<b>-0.00102</b>	<b>0.04180</b>	<b>0.00152</b>	<b>1.11923</b>	<b>0.00824</b>	<b>6.34648</b>	<b>-0.00036</b>	<b>-0.00235</b>
%RSD	13.10151	11.31662	0.42952	9.63069	0.44323	0.09920	0.01381	15.14627	55.01467
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	40.57186	-0.00140	0.00101	-0.00124	0.00122	13.44671	-0.00359	-0.00244	0.00336
#2	40.49955	-0.00104	0.00101	-0.00014	0.00228	13.47334	-0.00246	-0.00759	-0.00092
<b>Mean</b>	<b>40.53571</b>	<b>-0.00122</b>	<b>0.00101</b>	<b>-0.00069</b>	<b>0.00175</b>	<b>13.46002</b>	<b>-0.00303</b>	<b>-0.00502</b>	<b>0.00122</b>
%RSD	0.12615	20.71690	0.00000	112.29177	42.76726	0.13991	26.37659	72.64205	248.24763

ted: 10/11/2011 11:38:21 User: MIKE LUNDGREEN

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.37490	0.00022	1.09368	-0.00495	-0.00201	0.00297	-0.02214	-0.00065	0.01658
#2	4.37835	0.00093	1.09503	-0.00290	-0.00167	0.00015	-0.01868	-0.00090	0.01716
Mean	4.37663	0.00057	1.09435	-0.00392	-0.00184	0.00156	-0.02041	-0.00077	0.01687
%RSD	0.05580	88.21770	0.08696	36.94528	13.03679	127.67337	11.99691	22.56014	2.43656

	Zr ppm	Pb calc	Se calc
#1	-0.00018	0.00040	0.00143
#2	-0.00040	0.00147	-0.00314
Mean	-0.00029	0.00094	-0.00086
%RSD	51.96980	80.75160	378.06809

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:48

SampleId1 : IP111007-4MB

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 14:40:24

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE50

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00039	0.38951	0.00161	-0.00339	-0.00097	0.00044	-0.00501	-0.01830	-0.00021
#2	-0.00088	0.39005	-0.00330	-0.00456	-0.00097	0.00044	-0.00744	-0.01882	-0.00051
Mean	-0.00063	0.38978	-0.00085	-0.00397	-0.00097	0.00044	-0.00623	-0.01856	-0.00036
%RSD	55.06025	0.09634	411.01729	20.85899	0.00000	1.46682	27.63899	1.98101	57.44825

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00174	0.00022	-0.00331	0.03039	-0.06664	0.00368	-0.03607	-0.00009	-0.00123
#2	-0.00253	-0.00024	-0.00357	0.02966	-0.06009	0.00370	-0.03566	-0.00017	-0.00198
Mean	-0.00213	-0.00001	-0.00344	0.03002	-0.06337	0.00369	-0.03587	-0.00013	-0.00161
%RSD	26.12323	3518.82945	5.33691	1.71183	7.30835	0.49813	0.81183	42.37958	32.81495

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.01496	-0.00039	0.03168	-0.00435	0.00612	-0.02230	-0.00092	0.00114	-0.00026
#2	-0.01626	0.00083	0.03145	-0.00373	0.00343	-0.01647	0.00164	-0.00278	-0.00324
Mean	-0.01561	0.00022	0.03157	-0.00404	0.00478	-0.01938	0.00036	-0.00082	-0.00175
%RSD	5.86697	384.40622	0.51667	10.86409	39.77337	21.25633	501.79900	338.33190	120.23372

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.02705	0.00987	-0.00317	0.00781	-0.00233	-0.00794	-0.02620	-0.00086	0.00263
#2	-0.02748	0.01237	-0.00317	0.00593	-0.00231	-0.00375	-0.02216	-0.00068	0.00118
Mean	-0.02727	0.01112	-0.00317	0.00687	-0.00232	-0.00585	-0.02418	-0.00077	0.00190
%RSD	1.13470	15.91380	0.00000	19.29957	0.50349	50.65807	11.81480	16.21454	54.02135

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	UNDGREEN
#1	0.00002	0.00263	0.00020
#2	0.00015	0.00105	-0.00309
<b>Mean</b>	<b>0.00008</b>	<b>0.00184</b>	<b>-0.00144</b>
<b>%RSD</b>	<b>113.67523</b>	<b>60.88718</b>	<b>161.50727</b>

Method : Paragon File : 111010A  
SampleId1 : CCV SampleId2 :  
Analysis commenced : 10/10/2011 14:42:14  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:48  
[CV]

Position : STD6

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.19586	52.48018	0.51558	1.01497	0.98178	0.47583	0.54865	51.55203	0.51945
#2	0.19547	52.44529	0.51691	1.01642	0.98157	0.47627	0.54588	51.69106	0.52032
<b>Mean</b>	<b>0.19567</b>	<b>52.46274</b>	<b>0.51624</b>	<b>1.01570</b>	<b>0.98168</b>	<b>0.47605</b>	<b>0.54726</b>	<b>51.62155</b>	<b>0.51988</b>
<b>%RSD</b>	<b>0.14110</b>	<b>0.04703</b>	<b>0.18234</b>	<b>0.10115</b>	<b>0.01537</b>	<b>0.06524</b>	<b>0.35744</b>	<b>0.19044</b>	<b>0.11921</b>

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.48201	0.95371	1.04314	20.21136	49.64737	0.49499	50.90186	0.94592	0.98090
#2	0.48201	0.95423	1.04049	20.22812	49.43176	0.49267	50.89975	0.94775	0.98125
<b>Mean</b>	<b>0.48201</b>	<b>0.95397</b>	<b>1.04182</b>	<b>20.21974</b>	<b>49.53956</b>	<b>0.49383</b>	<b>50.90080</b>	<b>0.94684</b>	<b>0.98107</b>
<b>%RSD</b>	<b>0.00043</b>	<b>0.03825</b>	<b>0.18023</b>	<b>0.05860</b>	<b>0.30774</b>	<b>0.33203</b>	<b>0.00294</b>	<b>0.13594</b>	<b>0.02460</b>

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	48.87728	1.02188	5.16659	0.97944	0.96066	5.05950	0.49839	1.01118	0.98262
#2	48.71893	1.02135	5.21460	0.97851	0.95538	5.08002	0.50418	1.00122	0.98130
<b>Mean</b>	<b>48.79810</b>	<b>1.02161</b>	<b>5.19059</b>	<b>0.97897</b>	<b>0.95802</b>	<b>5.06976</b>	<b>0.50128</b>	<b>1.00620</b>	<b>0.98196</b>
<b>%RSD</b>	<b>0.22946</b>	<b>0.03718</b>	<b>0.65404</b>	<b>0.06702</b>	<b>0.39004</b>	<b>0.28615</b>	<b>0.81618</b>	<b>0.69952</b>	<b>0.09498</b>

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.78671	1.07057	0.49402	0.34614	0.45435	0.52722	4.74669	0.47910	0.95271
#2	4.78974	1.06196	0.49432	0.35179	0.45562	0.53396	4.74436	0.47882	0.95505
<b>Mean</b>	<b>4.78823</b>	<b>1.06626</b>	<b>0.49417</b>	<b>0.34897</b>	<b>0.45498</b>	<b>0.53059</b>	<b>4.74552</b>	<b>0.47896</b>	<b>0.95388</b>
<b>%RSD</b>	<b>0.04469</b>	<b>0.57090</b>	<b>0.04320</b>	<b>1.14507</b>	<b>0.19686</b>	<b>0.89742</b>	<b>0.03466</b>	<b>0.04133</b>	<b>0.17343</b>

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.99390	0.96691	0.99213
#2	0.99351	0.96308	0.98793
<b>Mean</b>	<b>0.99370</b>	<b>0.96500</b>	<b>0.99003</b>
<b>%RSD</b>	<b>0.02738</b>	<b>0.28092</b>	<b>0.29958</b>

Method : Paragon File : 111010A

Printed : 10/11/2011 11:37:48

SampleId1 : CCB                      SampleId2 :  
 Analysis commenced : 10/10/2011 14:44:12  
 Dilution ratio : 1.00000 to 1.00000      Tray :

[CB]  
 Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00030	0.12985	0.00161	-0.00235	-0.00009	0.00091	-0.00354	0.05216	0.00022
#2	-0.00006	0.12495	0.00265	-0.00187	-0.00020	0.00080	-0.00046	0.04514	0.00036
Mean	-0.00018	0.12740	0.00213	-0.00211	-0.00014	0.00086	-0.00200	0.04865	0.00029
%RSD	96.32029	2.71889	34.48771	16.16052	51.97720	8.61269	108.85911	10.20380	36.04554
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00047	-0.00005	-0.00203	0.01720	-0.07342	0.00391	0.02734	0.00014	-0.00001
#2	-0.00071	0.00035	-0.00289	0.01533	-0.06958	0.00390	0.02199	0.00014	0.00005
Mean	-0.00059	0.00015	-0.00246	0.01627	-0.07150	0.00390	0.02467	0.00014	0.00002
%RSD	29.15366	189.17972	24.66739	8.12382	3.79698	0.26159	15.34627	0.00000	238.09751
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.01410	-0.00202	0.00193	-0.00017	0.00264	0.00975	-0.00013	-0.00760	0.00119
#2	-0.02096	-0.00089	0.00032	-0.00177	0.00154	0.00101	-0.00191	-0.00165	0.00111
Mean	-0.01753	-0.00146	0.00112	-0.00097	0.00209	0.00538	-0.00102	-0.00462	0.00115
%RSD	27.67127	54.88358	101.61917	116.10482	37.17759	114.85656	123.87474	90.87123	4.48920
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.02287	-0.00157	-0.00245	0.00306	-0.00140	0.00079	-0.02215	-0.00033	-0.00057
#2	-0.02277	-0.00193	-0.00251	-0.00076	-0.00148	-0.00039	-0.01811	-0.00030	0.00030
Mean	-0.02282	-0.00175	-0.00248	0.00115	-0.00144	0.00020	-0.02013	-0.00031	-0.00013
%RSD	0.31401	14.42993	1.64137	234.99718	3.64946	412.80519	14.19393	7.89648	465.95259
	Zr ppm	Pb calc	Se calc						
#1	0.00134	0.00170	-0.00174						
#2	0.00176	0.00044	0.00019						
Mean	0.00155	0.00107	-0.00077						
%RSD	19.07628	83.40525	176.79467						

Method : Paragon                      File : 111010A  
 SampleId1 : IP111007-4RVS              SampleId2 :  
 Analysis commenced : 10/10/2011 14:51:21  
 Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:37:48  
 [SAMPLE]  
 Position : TUBE51

Final concentrations

Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
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#1	0.00879	1.02189	0.04607	0.04266	0.04705	0.00983	0.09467	4.88875	0.01999
#2	0.00868	1.02285	0.04134	0.04238	0.04712	0.00983	0.09354	4.91389	0.01929
<b>Mean</b>	<b>0.00874</b>	<b>1.02237</b>	<b>0.04370</b>	<b>0.04252</b>	<b>0.04708</b>	<b>0.00983</b>	<b>0.09410</b>	<b>4.90132</b>	<b>0.01964</b>
%RSD	0.84178	0.06641	7.65357	0.45855	0.10538	0.03540	0.85328	0.36279	2.54118

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.01763	0.04893	0.04994	0.99645	7.34628	0.03967	4.71835	0.04681	0.09665
#2	0.01726	0.05006	0.04942	1.00021	7.32249	0.03962	4.69317	0.04720	0.09651
<b>Mean</b>	<b>0.01744</b>	<b>0.04949</b>	<b>0.04968</b>	<b>0.99833</b>	<b>7.33439</b>	<b>0.03964</b>	<b>4.70576</b>	<b>0.04701</b>	<b>0.09658</b>
%RSD	1.47714	1.61645	0.73561	0.26683	0.22936	0.07729	0.37837	0.58719	0.09936

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	7.60621	0.05047	0.93900	0.04405	0.04934	0.87266	0.09596	0.03404	0.04004
#2	7.57908	0.05014	0.90700	0.04955	0.04742	0.86099	0.09283	0.03326	0.04142
<b>Mean</b>	<b>7.59265</b>	<b>0.05031</b>	<b>0.92300</b>	<b>0.04680</b>	<b>0.04838</b>	<b>0.86683</b>	<b>0.09440</b>	<b>0.03365</b>	<b>0.04073</b>
%RSD	0.25260	0.45960	2.45151	8.30900	2.79277	0.95170	2.34287	1.64209	2.39881

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	0.23020	0.09847	0.04516	-0.00115	0.04357	0.09094	0.46425	0.04786	0.04594
#2	0.22805	0.09704	0.04505	0.00135	0.04397	0.09696	0.46886	0.04829	0.04623
<b>Mean</b>	<b>0.22912</b>	<b>0.09776</b>	<b>0.04511</b>	<b>0.00010</b>	<b>0.04377</b>	<b>0.09395</b>	<b>0.46656</b>	<b>0.04808</b>	<b>0.04608</b>
%RSD	0.66376	1.03483	0.18098	1776.09695	0.64116	4.52387	0.69942	0.62416	0.44607

	Zr ppm	Pb calc	Se calc
#1	0.04949	0.04758	0.03804
#2	0.05018	0.04813	0.03870
<b>Mean</b>	<b>0.04983</b>	<b>0.04785</b>	<b>0.03837</b>
%RSD	0.97779	0.82264	1.21879

Method : Paragon File : 111010A  
SampleId1 : IP111007-4LCS SampleId2 :  
Analysis commenced : 10/10/2011 14:53:11  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:48  
[SAMPLE]

Position : TUBE52

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.08940	2.07422	1.84659	0.44983	1.91677	0.04673	-0.00706	38.55528	0.04663
#2	0.08828	2.07099	1.83897	0.45142	1.92829	0.04694	-0.00673	38.57232	0.04650
<b>Mean</b>	<b>0.08884</b>	<b>2.07260</b>	<b>1.84278</b>	<b>0.45062</b>	<b>1.92253</b>	<b>0.04684</b>	<b>-0.00689</b>	<b>38.56380</b>	<b>0.04657</b>
%RSD	0.89017	0.11023	0.29229	0.24918	0.42393	0.31761	3.34468	0.03125	0.20780

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.45708	0.18496	0.25163	0.96893	34.67491	0.43815	37.36485	0.45830	0.94766

#2	0.45788	0.18545	0.25258	0.97395	34.74620	0.43916	37.37660	0.45955	0.94575
<b>Mean</b>	<b>0.45748</b>	<b>0.18520</b>	<b>0.25211</b>	<b>0.97144</b>	<b>34.71055</b>	<b>0.43866</b>	<b>37.37072</b>	<b>0.45892</b>	<b>0.94671</b>
%RSD	0.12434	0.18786	0.26641	0.36554	0.14523	0.16275	0.02224	0.19368	0.14274

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	33.83296	0.48376	-0.00407	0.45687	0.44960	-0.02813	0.45920	1.66127	1.62055
#2	33.80849	0.48507	-0.00176	0.46529	0.45042	-0.00773	0.46374	1.65899	1.62558
<b>Mean</b>	<b>33.82073</b>	<b>0.48442</b>	<b>-0.00291</b>	<b>0.46108</b>	<b>0.45001</b>	<b>-0.01793</b>	<b>0.46147</b>	<b>1.66013</b>	<b>1.62306</b>
%RSD	0.05117	0.19124	55.98981	1.29112	0.12921	80.44300	0.69602	0.09727	0.21927

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.67015	0.50049	0.48279	-0.02474	0.44542	1.98247	-0.02049	0.47169	0.45113
#2	1.67177	0.50121	0.48530	-0.02344	0.44639	1.98175	-0.03145	0.47187	0.44909
<b>Mean</b>	<b>1.67096</b>	<b>0.50085</b>	<b>0.48404</b>	<b>-0.02409</b>	<b>0.44590</b>	<b>1.98211</b>	<b>-0.02597</b>	<b>0.47178</b>	<b>0.45011</b>
%RSD	0.06851	0.10093	0.36554	3.83343	0.15360	0.02599	29.85794	0.02668	0.32053

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00538	0.45202	1.63411
#2	0.00449	0.45537	1.63670
<b>Mean</b>	<b>0.00493</b>	<b>0.45370</b>	<b>1.63541</b>
%RSD	12.85560	0.52242	0.11227

Method : Paragon File : 111010A  
SampleId1 : IP111007-4LCSD SampleId2 :  
Analysis commenced : 10/10/2011 14:55:07  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:48  
[SAMPLE]  
Position : TUBE53

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.08789	2.05386	1.83550	0.44776	1.90863	0.04661	-0.00415	38.23814	0.04635
#2	0.08844	2.05747	1.83724	0.44852	1.91061	0.04678	-0.00853	38.45413	0.04663
<b>Mean</b>	<b>0.08817</b>	<b>2.05567</b>	<b>1.83637</b>	<b>0.44814</b>	<b>1.90962</b>	<b>0.04669</b>	<b>-0.00634</b>	<b>38.34614</b>	<b>0.04649</b>
%RSD	0.43422	0.12410	0.06682	0.11983	0.07334	0.26025	48.84996	0.39829	0.42626

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.45458	0.18329	0.24984	0.96767	34.42999	0.43526	37.06139	0.45492	0.94015
#2	0.45665	0.18413	0.25027	0.97196	34.42114	0.43517	37.19653	0.45743	0.94773
<b>Mean</b>	<b>0.45561</b>	<b>0.18371</b>	<b>0.25006</b>	<b>0.96982</b>	<b>34.42556</b>	<b>0.43522</b>	<b>37.12896</b>	<b>0.45617</b>	<b>0.94394</b>
%RSD	0.32100	0.32301	0.12175	0.31275	0.01817	0.01453	0.25738	0.38968	0.56749

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	33.52750	0.48186	-0.00245	0.45980	0.44957	-0.02230	0.45626	1.66046	1.61995
#2	33.50846	0.48472	0.00262	0.46012	0.45361	-0.01356	0.45810	1.66956	1.63305

<b>Mean</b>	<b>33.51798</b>	<b>0.48329</b>	<b>0.00009</b>	<b>0.45996</b>	<b>0.45159</b>	<b>-0.01793</b>	<b>0.45718</b>	<b>1.66501</b>	<b>1.62650</b>
<b>%RSD</b>	<b>0.04018</b>	<b>0.41824</b>	<b>4193.41499</b>	<b>0.04978</b>	<b>0.63303</b>	<b>34.47548</b>	<b>0.28406</b>	<b>0.38622</b>	<b>0.56946</b>
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.66123	0.49620	0.47833	-0.02578	0.44159	1.97432	-0.03318	0.46765	0.44559
#2	1.66363	0.49763	0.47921	-0.02921	0.44230	1.98618	-0.03665	0.47038	0.45229
<b>Mean</b>	<b>1.66243</b>	<b>0.49692</b>	<b>0.47877</b>	<b>-0.02750</b>	<b>0.44194</b>	<b>1.98025</b>	<b>-0.03491</b>	<b>0.46902</b>	<b>0.44894</b>
<b>%RSD</b>	<b>0.10200</b>	<b>0.20365</b>	<b>0.13084</b>	<b>8.82002</b>	<b>0.11259</b>	<b>0.42368</b>	<b>7.01751</b>	<b>0.41108</b>	<b>1.05589</b>
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00263	0.45298	1.63344						
#2	0.00294	0.45578	1.64521						
<b>Mean</b>	<b>0.00278</b>	<b>0.45438</b>	<b>1.63933</b>						
<b>%RSD</b>	<b>7.91642</b>	<b>0.43642</b>	<b>0.50749</b>						

Method : Paragon File : 111010A  
SampleId1 : 1109301-1 SampleId2 :  
Analysis commenced : 10/10/2011 14:56:57  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:49

[SAMPLE]

Position : TUBE54

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.02875	18.87907	2.31577	0.04238	1.77403	0.00422	0.01265	27.75698	-0.00107
#2	0.02847	18.75705	2.30550	0.04128	1.76864	0.00423	0.01036	27.72584	-0.00081
<b>Mean</b>	<b>0.02861</b>	<b>18.81806</b>	<b>2.31063</b>	<b>0.04183</b>	<b>1.77133</b>	<b>0.00423</b>	<b>0.01150</b>	<b>27.74141</b>	<b>-0.00094</b>
<b>%RSD</b>	<b>0.70037</b>	<b>0.45849</b>	<b>0.31428</b>	<b>1.86441</b>	<b>0.21523</b>	<b>0.15028</b>	<b>14.08492</b>	<b>0.07938</b>	<b>19.58094</b>
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.09781	1.59126	0.55934	341.91412	8.77549	0.02577	10.27761	63.41557	0.43048
#2	0.09721	1.59016	0.55696	341.98653	8.72665	0.02566	10.23455	63.44479	0.43449
<b>Mean</b>	<b>0.09751</b>	<b>1.59071</b>	<b>0.55815</b>	<b>341.95032</b>	<b>8.75107</b>	<b>0.02572</b>	<b>10.25608</b>	<b>63.43018</b>	<b>0.43248</b>
<b>%RSD</b>	<b>0.43739</b>	<b>0.04922</b>	<b>0.30255</b>	<b>0.01497</b>	<b>0.39466</b>	<b>0.31775</b>	<b>0.29684</b>	<b>0.03257</b>	<b>0.65608</b>
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.28195	0.08549	4.22660	0.10382	0.10133	0.81433	-0.00015	-0.03412	0.04588
#2	4.25452	0.08439	4.20439	0.09883	0.10172	0.84058	-0.00055	-0.02652	0.04371
<b>Mean</b>	<b>4.26823</b>	<b>0.08494</b>	<b>4.21550</b>	<b>0.10133</b>	<b>0.10152</b>	<b>0.82745</b>	<b>-0.00035</b>	<b>-0.03032</b>	<b>0.04479</b>
<b>%RSD</b>	<b>0.45450</b>	<b>0.91573</b>	<b>0.37269</b>	<b>3.47795</b>	<b>0.27048</b>	<b>2.24312</b>	<b>80.47837</b>	<b>17.73031</b>	<b>3.41633</b>
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	28.23065	0.00664	0.67750	0.06389	1.23447	-0.00756	0.12361	1.52762	0.26674
#2	28.15190	0.00593	0.67493	0.07058	1.22931	-0.01327	0.11144	1.52475	0.26848
<b>Mean</b>	<b>28.19128</b>	<b>0.00629</b>	<b>0.67622</b>	<b>0.06723</b>	<b>1.23189</b>	<b>-0.01042</b>	<b>0.11753</b>	<b>1.52618</b>	<b>0.26761</b>

%RSD	0.19754	7.97378	0.26813	7.03652	0.29589	38.74681	7.32152	0.13306	0.46154
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	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.01060	0.10216	0.01924
#2	0.00995	0.10076	0.02032
<b>Mean</b>	<b>0.01027</b>	<b>0.10146</b>	<b>0.01978</b>
%RSD	4.43984	0.97615	3.89085

Method : Paragon      File : 111010A  
 SampleId1 : 1109301-1D      SampleId2 :  
 Analysis commenced : 10/10/2011 14:58:58  
 Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:37:49  
 [SAMPLE]  
 Position : TUBE55

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.03529	24.46658	2.90976	0.05079	2.17463	0.00530	0.01419	33.30047	-0.00180
#2	0.03686	24.41601	2.91210	0.05355	2.17857	0.00524	0.00819	33.34168	-0.00165
<b>Mean</b>	<b>0.03607</b>	<b>24.44129</b>	<b>2.91093</b>	<b>0.05217</b>	<b>2.17660</b>	<b>0.00527</b>	<b>0.01119</b>	<b>33.32108</b>	<b>-0.00173</b>
%RSD	3.06723	0.14629	0.05683	3.73736	0.12799	0.79855	37.91859	0.08745	6.37525

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.11213	2.00274	0.68692	412.33519	11.56096	0.03293	12.88748	71.65946	0.51123
#2	0.11220	2.00932	0.68563	413.18025	11.53331	0.03281	12.91981	71.82154	0.51252
<b>Mean</b>	<b>0.11217</b>	<b>2.00603</b>	<b>0.68627</b>	<b>412.75772</b>	<b>11.54714</b>	<b>0.03287</b>	<b>12.90365</b>	<b>71.74050</b>	<b>0.51188</b>
%RSD	0.03848	0.23201	0.13284	0.14477	0.16931	0.24857	0.17719	0.15976	0.17861

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.71134	0.10615	5.27950	0.12030	0.12643	0.79683	0.00084	-0.03397	0.05353
#2	4.69700	0.10437	5.25240	0.12128	0.12301	0.80266	0.00278	-0.02924	0.04811
<b>Mean</b>	<b>4.70417</b>	<b>0.10526</b>	<b>5.26595</b>	<b>0.12079</b>	<b>0.12472</b>	<b>0.79974</b>	<b>0.00181</b>	<b>-0.03160</b>	<b>0.05082</b>
%RSD	0.21556	1.19838	0.36398	0.57261	1.93824	0.51572	76.05609	10.57216	7.54345

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	33.28329	0.00988	0.84497	0.09209	1.52439	-0.02652	0.16512	1.91045	0.31041
#2	33.34068	0.00666	0.84671	0.08861	1.52682	-0.01922	0.17089	1.91322	0.31420
<b>Mean</b>	<b>33.31198</b>	<b>0.00827</b>	<b>0.84584</b>	<b>0.09035</b>	<b>1.52561</b>	<b>-0.02287</b>	<b>0.16801</b>	<b>1.91184</b>	<b>0.31230</b>
%RSD	0.12184	27.53683	0.14547	2.71767	0.11284	22.58467	2.42990	0.10248	0.85715

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.01238	0.12439	0.02439
#2	0.01275	0.12243	0.02235
<b>Mean</b>	<b>0.01257</b>	<b>0.12341</b>	<b>0.02337</b>
%RSD	2.10320	1.11988	6.17963

ted: 10/11/2011 11:38:21 User: MIKE LUNDGREEN  
 Method : Paragon File : 111010A  
 SampleId1 : 1109301-1L 5X SampleId2 :  
 Analysis commenced : 10/10/2011 15:00:48  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:49  
 [SAMPLE]  
 Position : TUBE56

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00605	3.85092	0.48801	0.00509	0.36042	0.00138	-0.00309	5.83529	-0.00065
#2	0.00552	3.84284	0.48820	0.00716	0.36038	0.00134	-0.00114	5.82375	-0.00058
Mean	0.00579	3.84688	0.48810	0.00613	0.36040	0.00136	-0.00212	5.82952	-0.00061
%RSD	6.55893	0.14870	0.02754	23.86979	0.00691	1.89185	65.07042	0.14000	7.78431
	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.02017	0.33163	0.10838	66.30717	1.42539	0.00750	2.15539	13.97872	0.08871
#2	0.01957	0.33112	0.10881	66.25910	1.41362	0.00750	2.15126	13.97331	0.08722
Mean	0.01987	0.33137	0.10859	66.28314	1.41951	0.00750	2.15332	13.97601	0.08796
%RSD	2.15388	0.10906	0.28085	0.05128	0.58652	0.00000	0.13537	0.02738	1.19996
	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.71324	0.01664	0.87686	0.02115	0.02103	0.15837	-0.00025	-0.01189	0.00459
#2	0.71217	0.01849	0.88567	0.02094	0.02061	0.16128	0.00119	-0.01335	0.00836
Mean	0.71271	0.01757	0.88127	0.02104	0.02082	0.15982	0.00047	-0.01262	0.00647
%RSD	0.10564	7.41777	0.70685	0.71730	1.42771	1.28936	215.78324	8.15294	41.17343
	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	5.92675	0.00278	0.13501	0.02524	0.25194	-0.00554	0.01061	0.31307	0.05756
#2	5.92416	0.00278	0.13509	0.02183	0.25150	0.00017	0.00603	0.31366	0.05698
Mean	5.92545	0.00278	0.13505	0.02353	0.25172	-0.00269	0.00832	0.31337	0.05727
%RSD	0.03095	0.01322	0.04040	10.26072	0.12550	150.32067	38.95022	0.13354	0.71785
	Zr	Pb	Se						
	ppm	calc	calc						
#1	0.00192	0.02107	-0.00090						
#2	0.00200	0.02072	0.00113						
Mean	0.00196	0.02089	0.00011						
%RSD	2.86584	1.18946	1255.36744						

Method : Paragon File : 111010A  
 SampleId1 : 1109301-1MS SampleId2 :  
 Analysis commenced : 10/10/2011 15:02:38  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:49  
 [SAMPLE]  
 Position : TUBE57

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.11917	39.09387	4.22411	0.48601	3.65161	0.04988	0.00728	65.69810	0.04484
#2	0.12030	39.36238	4.22164	0.48359	3.67101	0.04978	0.00374	65.85280	0.04552
<b>Mean</b>	<b>0.11973</b>	<b>39.22813</b>	<b>4.22288</b>	<b>0.48480</b>	<b>3.66131</b>	<b>0.04983</b>	<b>0.00551</b>	<b>65.77545</b>	<b>0.04518</b>
%RSD	0.66520	0.48401	0.04134	0.35250	0.37450	0.13595	45.41794	0.16631	1.07576
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.54339	1.79905	0.80961	350.32939	47.42883	0.50742	48.06567	61.34749	1.35096
#2	0.54431	1.80582	0.81406	352.28853	47.68332	0.50992	48.26571	61.61257	1.35575
<b>Mean</b>	<b>0.54385</b>	<b>1.80244</b>	<b>0.81183</b>	<b>351.30896</b>	<b>47.55607</b>	<b>0.50867</b>	<b>48.16569</b>	<b>61.48003</b>	<b>1.35336</b>
%RSD	0.11966	0.26556	0.38793	0.39433	0.37840	0.34718	0.29367	0.30487	0.25031
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	40.75059	0.56757	4.21526	0.55411	0.53049	0.66560	0.36979	1.65432	1.66711
#2	40.99910	0.56924	4.18335	0.55081	0.53277	0.68309	0.37710	1.67400	1.66528
<b>Mean</b>	<b>40.87484</b>	<b>0.56840</b>	<b>4.19931</b>	<b>0.55246</b>	<b>0.53163</b>	<b>0.67435</b>	<b>0.37345</b>	<b>1.66416</b>	<b>1.66619</b>
%RSD	0.42990	0.20751	0.53726	0.42225	0.30354	1.83461	1.38529	0.83616	0.07734
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	37.81612	0.50442	1.16149	0.05216	1.99542	1.92691	0.14097	2.01140	0.70522
#2	38.08693	0.50226	1.16747	0.04199	2.00460	1.93529	0.14252	2.01160	0.70580
<b>Mean</b>	<b>37.95152</b>	<b>0.50334</b>	<b>1.16448</b>	<b>0.04707</b>	<b>2.00001</b>	<b>1.93110</b>	<b>0.14174</b>	<b>2.01150</b>	<b>0.70551</b>
%RSD	0.50457	0.30326	0.36299	15.27012	0.32425	0.30718	0.77410	0.00707	0.05853
	Zr ppm	Pb calc	Se calc						
#1	0.01272	0.53836	1.66285						
#2	0.01339	0.53878	1.66819						
<b>Mean</b>	<b>0.01305</b>	<b>0.53857</b>	<b>1.66552</b>						
%RSD	3.62244	0.05562	0.22661						

Method : Paragon File : 111010A  
SampleId1 : 1109301-1MSD SampleId2 :  
Analysis commenced : 10/10/2011 15:04:27  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:49

[SAMPLE]

Position : TUBE58

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.11160	32.24596	3.58632	0.45390	3.17524	0.04498	0.00298	56.32905	0.04223
#2	0.11219	32.22509	3.57965	0.44934	3.16183	0.04484	0.00606	56.40956	0.04258
<b>Mean</b>	<b>0.11189</b>	<b>32.23553</b>	<b>3.58298</b>	<b>0.45162</b>	<b>3.16854</b>	<b>0.04491</b>	<b>0.00452</b>	<b>56.36930</b>	<b>0.04240</b>
%RSD	0.37061	0.04578	0.13170	0.71345	0.29917	0.21470	48.12836	0.10099	0.59214
	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo

	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.48864	1.41146	0.68210	278.25824	42.44904	0.45946	42.75207	51.43986	1.20007
#2	0.48772	1.40909	0.68141	278.66042	42.33501	0.45824	42.76007	51.52954	1.20649
<b>Mean</b>	<b>0.48818</b>	<b>1.41027</b>	<b>0.68175</b>	<b>278.45933</b>	<b>42.39203</b>	<b>0.45885</b>	<b>42.75607</b>	<b>51.48470</b>	<b>1.20328</b>
%RSD	0.13432	0.11853	0.07142	0.10213	0.19020	0.18803	0.01323	0.12316	0.37767

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	36.68643	0.50440	3.32408	0.50674	0.48857	0.55771	0.35850	1.55656	1.55713
#2	36.67175	0.50598	3.34172	0.50377	0.49139	0.56938	0.35557	1.56288	1.56948
<b>Mean</b>	<b>36.67909</b>	<b>0.50519</b>	<b>3.33290</b>	<b>0.50525</b>	<b>0.48998</b>	<b>0.56355</b>	<b>0.35703</b>	<b>1.55972</b>	<b>1.56331</b>
%RSD	0.02831	0.22091	0.37420	0.41596	0.40691	1.46336	0.57947	0.28654	0.55857

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	31.16924	0.46967	0.98232	0.03238	1.71006	1.86452	0.08789	1.63568	0.61970
#2	31.19410	0.46108	0.97724	0.03418	1.70837	1.85990	0.09223	1.63330	0.61882
<b>Mean</b>	<b>31.18167</b>	<b>0.46537</b>	<b>0.97978</b>	<b>0.03328</b>	<b>1.70921</b>	<b>1.86221</b>	<b>0.09006</b>	<b>1.63449</b>	<b>0.61926</b>
%RSD	0.05639	1.30505	0.36668	3.82285	0.07017	0.17531	3.40986	0.10306	0.09996

	Zr ppm	Pb calc	Se calc
#1	0.01082	0.49462	1.55694
#2	0.01083	0.49551	1.56728
<b>Mean</b>	<b>0.01082</b>	<b>0.49506</b>	<b>1.56211</b>
%RSD	0.05407	0.12725	0.46812

Method : Paragon File : 111010A  
SampleId1 : ZZZ SampleId2 :  
Analysis commenced : 10/10/2011 15:06:16  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:50  
[SAMPLE]

Position : TUBE59

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-3.46169	25.39603	12.29392	0.09781	9.90943	0.45624	-0.08747	18.07118	-0.10536
#2	-3.46356	25.57337	12.23301	0.09554	9.95914	0.45598	-0.09960	18.01269	-0.10497
<b>Mean</b>	<b>-3.46263</b>	<b>25.48470</b>	<b>12.26347</b>	<b>0.09668</b>	<b>9.93428</b>	<b>0.45611</b>	<b>-0.09353</b>	<b>18.04193</b>	<b>-0.10517</b>
%RSD	0.03821	0.49207	0.35122	1.66423	0.35384	0.04029	9.17060	0.22923	0.25751

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.02262	0.24492	0.51157	111.01353	9.89839	0.08848	-5.56511	0.37868	0.65332
#2	0.02081	0.24401	0.51741	110.71905	9.96733	0.08916	-5.57538	0.37680	0.65018
<b>Mean</b>	<b>0.02171</b>	<b>0.24446</b>	<b>0.51449</b>	<b>110.86629</b>	<b>9.93286</b>	<b>0.08882</b>	<b>-5.57025</b>	<b>0.37774</b>	<b>0.65175</b>
%RSD	5.89570	0.26322	0.80282	0.18782	0.49071	0.54267	0.13030	0.35253	0.33994

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
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#1	59.32228	0.15593	17.32159	27.77468	27.34744	128.99237	0.21670	-2.12832	-0.04729
#2	59.77823	0.15652	17.39078	27.80267	27.43721	129.31808	0.21880	-2.16934	-0.04314
<b>Mean</b>	<b>59.55025</b>	<b>0.15623</b>	<b>17.35619</b>	<b>27.78868</b>	<b>27.39233</b>	<b>129.15523</b>	<b>0.21775</b>	<b>-2.14883</b>	<b>-0.04521</b>
%RSD	0.54140	0.26920	0.28190	0.07123	0.23173	0.17832	0.68093	1.34972	6.48976

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	22.45639	-0.03873	8.70114	6.17614	0.60433	-3.35845	-28.76702	-0.44399	5.89766
#2	22.48787	-0.05303	8.72180	6.16963	0.60483	-3.39946	-28.68174	-0.44799	5.85904
<b>Mean</b>	<b>22.47213</b>	<b>-0.04588</b>	<b>8.71147</b>	<b>6.17289</b>	<b>0.60458</b>	<b>-3.37896</b>	<b>-28.72438</b>	<b>-0.44599</b>	<b>5.87835</b>
%RSD	0.09906	22.03250	0.16771	0.07454	0.05813	0.85817	0.20994	0.63381	0.46457

	Zr ppm	Pb calc	Se calc
#1	-0.12820	27.48971	-0.74027
#2	-0.12693	27.55891	-0.75116
<b>Mean</b>	<b>-0.12757</b>	<b>27.52431</b>	<b>-0.74572</b>
%RSD	0.70288	0.17777	1.03268

Method : Paragon                      File : 111010A  
SampleId1 : ZZZ                      SampleId2 :  
**Analysis commenced : 10/10/2011 15:08:06**  
Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:37:50

[SAMPLE]

Position : TUBE60

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00190	87.63596	0.18772	0.04597	1.18030	0.00926	0.00666	362.76761	0.00213
#2	-0.00224	87.49212	0.18251	0.04624	1.17517	0.00920	0.00098	364.48811	0.00232
<b>Mean</b>	<b>-0.00207</b>	<b>87.56404</b>	<b>0.18511</b>	<b>0.04611</b>	<b>1.17774</b>	<b>0.00923</b>	<b>0.00382</b>	<b>363.62786</b>	<b>0.00223</b>
%RSD	11.32450	0.11616	1.99071	0.42290	0.30823	0.48674	105.30146	0.33457	6.03632

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.06226	0.07273	0.20549	174.10320	30.37603	0.13123	42.47557	2.92981	0.13649
#2	0.06165	0.07225	0.20379	174.80072	30.21068	0.13059	42.47978	2.93731	0.13744
<b>Mean</b>	<b>0.06195</b>	<b>0.07249</b>	<b>0.20464</b>	<b>174.45196</b>	<b>30.29335</b>	<b>0.13091</b>	<b>42.47767</b>	<b>2.93356</b>	<b>0.13696</b>
%RSD	0.70061	0.46721	0.58779	0.28272	0.38597	0.34473	0.00701	0.18065	0.49060

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	1.55107	0.12230	4.97135	0.21254	0.20699	6.37058	0.01085	0.11550	0.14614
#2	1.54208	0.11867	4.98845	0.20893	0.21015	6.40287	0.00652	0.11114	0.14599
<b>Mean</b>	<b>1.54658</b>	<b>0.12048</b>	<b>4.97990</b>	<b>0.21073</b>	<b>0.20857</b>	<b>6.38673</b>	<b>0.00868</b>	<b>0.11332</b>	<b>0.14606</b>
%RSD	0.41122	2.12896	0.24270	1.21020	1.07284	0.35748	35.21854	2.71838	0.07239

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.67352	0.00922	2.55751	0.10210	0.24222	0.01631	0.99063	0.86090	0.45492



#2	3.66062	0.00994	2.54284	0.11043	0.24238	0.01213	0.97745	0.86174	0.45550
<b>Mean</b>	<b>3.66707</b>	<b>0.00958</b>	<b>2.55018</b>	<b>0.10627</b>	<b>0.24230</b>	<b>0.01422</b>	<b>0.98404</b>	<b>0.86132</b>	<b>0.45521</b>
%RSD	0.24885	5.27406	0.40672	5.54567	0.04829	20.77445	0.94690	0.06936	0.09056

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.05613	0.20883	0.13593
#2	0.05547	0.20974	0.13438
<b>Mean</b>	<b>0.05580</b>	<b>0.20929</b>	<b>0.13516</b>
%RSD	0.83370	0.30735	0.81114

Method : Paragon File : 111010A  
SampleId1 : CCV SampleId2 :  
Analysis commenced : 10/10/2011 15:11:55  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:50  
[CV]

Position : STD6

# Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.19590	52.01087	0.50873	1.00293	0.97204	0.46965	0.53430	51.31068	0.51769
#2	0.19478	51.89347	0.50645	1.00196	0.96945	0.46842	0.53527	51.10659	0.51654
<b>Mean</b>	<b>0.19534</b>	<b>51.95217</b>	<b>0.50759</b>	<b>1.00245</b>	<b>0.97074</b>	<b>0.46904</b>	<b>0.53479</b>	<b>51.20863</b>	<b>0.51711</b>
%RSD	0.40806	0.15978	0.31789	0.06832	0.18902	0.18628	0.12847	0.28182	0.15694

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.47647	0.94586	1.03084	19.88457	49.16291	0.48701	50.48818	0.93469	0.96766
#2	0.47483	0.94298	1.03033	19.82796	49.07682	0.48635	50.43283	0.93390	0.97456
<b>Mean</b>	<b>0.47565</b>	<b>0.94442</b>	<b>1.03059</b>	<b>19.85627</b>	<b>49.11986</b>	<b>0.48668</b>	<b>50.46050</b>	<b>0.93429</b>	<b>0.97111</b>
%RSD	0.24423	0.21516	0.03544	0.20160	0.12393	0.09638	0.07756	0.05989	0.50202

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	48.72959	1.00511	5.10101	0.97297	0.94723	5.06243	0.49713	0.98844	0.96103
#2	48.65885	1.00135	5.08177	0.96912	0.94580	5.07709	0.49388	0.98201	0.95830
<b>Mean</b>	<b>48.69422</b>	<b>1.00323</b>	<b>5.09139</b>	<b>0.97104</b>	<b>0.94651</b>	<b>5.06976</b>	<b>0.49551</b>	<b>0.98523</b>	<b>0.95966</b>
%RSD	0.10273	0.26498	0.26722	0.28080	0.10642	0.20439	0.46396	0.46183	0.20109

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.74994	1.05551	0.48904	0.34712	0.45142	0.52324	4.69310	0.47475	0.93663
#2	4.73982	1.05372	0.48840	0.34239	0.45025	0.53422	4.69603	0.47152	0.93634
<b>Mean</b>	<b>4.74488</b>	<b>1.05461</b>	<b>0.48872</b>	<b>0.34476</b>	<b>0.45084</b>	<b>0.52873</b>	<b>4.69456</b>	<b>0.47314</b>	<b>0.93648</b>
%RSD	0.15083	0.12014	0.09299	0.97031	0.18309	1.46845	0.04416	0.48308	0.02208

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.97945	0.95580	0.97016
#2	0.97784	0.95357	0.96620

Mean 0.97864 0.95468 0.96818UNDGREEN  
%RSD 0.11634 0.16548 0.28944

Method : Paragon File : 111010A  
SampleId1 : CCB SampleId2 :  
Analysis commenced : 10/10/2011 15:13:51  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:50  
[CB]

Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00050	0.13754	-0.00179	-0.00180	0.00072	0.00095	-0.00403	0.07765	-0.00002
#2	0.00023	0.13434	0.00038	-0.00166	0.00054	0.00085	-0.00046	0.07375	0.00029
Mean	-0.00013	0.13594	-0.00070	-0.00173	0.00063	0.00090	-0.00224	0.07570	0.00014
%RSD	390.49733	1.66064	218.41134	5.62790	19.73100	7.71100	112.49090	3.64368	160.80069

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00047	-0.00022	-0.00255	0.04087	-0.03615	0.00398	0.03022	0.00178	0.00094
#2	-0.00047	0.00021	-0.00307	0.03682	-0.02147	0.00399	0.02981	0.00147	0.00039
Mean	-0.00047	0.00000	-0.00281	0.03885	-0.02881	0.00399	0.03002	0.00163	0.00066
%RSD	0.06102	18824.00518	13.02327	7.37110	36.02826	0.15377	0.96997	13.57782	57.74089

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.02321	-0.00083	-0.00453	0.00101	0.00094	-0.00190	-0.00123	0.00440	0.00054
#2	-0.02571	-0.00092	-0.00130	0.00183	-0.00009	0.01267	0.00132	0.00373	-0.00070
Mean	-0.02446	-0.00088	-0.00291	0.00142	0.00042	0.00538	0.00005	0.00406	-0.00008
%RSD	7.21031	7.20112	78.38583	40.65410	171.48155	191.42689	3936.20553	11.61920	1101.83039

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.01656	0.00093	-0.00176	0.00072	-0.00137	0.00235	-0.01582	-0.00008	0.00030
#2	-0.01700	0.00307	-0.00188	0.00273	-0.00130	0.00099	-0.01062	-0.00015	0.00030
Mean	-0.01678	0.00200	-0.00182	0.00172	-0.00133	0.00167	-0.01322	-0.00011	0.00030
%RSD	1.84809	75.75083	4.47826	82.48750	3.94344	57.67133	27.79308	44.15039	0.00000

	Zr ppm	Pb calc	Se calc
#1	0.00168	0.00096	0.00182
#2	0.00150	0.00055	0.00078
Mean	0.00159	0.00076	0.00130
%RSD	7.78994	38.79079	56.92160

Method : Paragon File : 111010A  
SampleId1 : ZZZ SampleId2 :  
Analysis commenced : 10/10/2011 15:15:46  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:50  
[SAMPLE]

Position : TUBE61

Final concentrations38:22 User: MIKE LUNDGREEN

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.78474	5.17589	2.71889	0.01957	2.07343	0.10600	-0.01979	4.34282	-0.02372
#2	-0.78633	5.17621	2.71295	0.01839	2.08487	0.10579	-0.02158	4.29702	-0.02371
Mean	-0.78554	5.17605	2.71592	0.01898	2.07915	0.10590	-0.02069	4.31992	-0.02372
%RSD	0.14333	0.00442	0.15451	4.36546	0.38915	0.13632	6.11296	0.74969	0.01889
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.00446	0.05666	0.09881	23.31111	1.57440	0.01829	-1.29361	0.08758	0.14667
#2	0.00405	0.05556	0.09779	23.27953	1.56783	0.01831	-1.30431	0.08586	0.14565
Mean	0.00425	0.05611	0.09830	23.29532	1.57112	0.01830	-1.29896	0.08672	0.14616
%RSD	6.80248	1.39180	0.73590	0.09586	0.29561	0.11163	0.58241	1.40136	0.49259
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	10.85293	0.03742	3.69485	5.98751	5.79493	26.86556	0.04113	-0.48674	-0.01434
#2	10.90273	0.03721	3.69839	5.97774	5.81108	26.99171	0.04658	-0.49232	-0.00926
Mean	10.87783	0.03732	3.69662	5.98262	5.80301	26.92863	0.04386	-0.48953	-0.01180
%RSD	0.32369	0.39426	0.06762	0.11548	0.19678	0.33127	8.79220	0.80595	30.43250
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.85475	-0.00387	1.87093	1.41740	0.13329	-0.74156	-6.39854	-0.11456	1.40872
#2	3.85540	-0.01067	1.87739	1.41677	0.13366	-0.75343	-6.40311	-0.11686	1.39875
Mean	3.85507	-0.00727	1.87416	1.41709	0.13348	-0.74750	-6.40083	-0.11571	1.40373
%RSD	0.01191	66.06178	0.24376	0.03127	0.19277	1.12288	0.05057	1.40448	0.50234
	Zr ppm	Pb calc	Se calc						
#1	-0.02879	5.85906	-0.17165						
#2	-0.02955	5.86658	-0.17012						
Mean	-0.02917	5.86282	-0.17088						
%RSD	1.84589	0.09067	0.63284						

Method : Paragon File : 111010A  
SampleId1 : ZZZ SampleId2 :  
Analysis commenced : 10/10/2011 15:17:36  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:50  
[SAMPLE]  
Position : TUBE62

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.08784	127.21624	1.98506	0.40482	3.12763	0.05447	0.00065	386.32119	0.04790
#2	0.08705	128.23336	1.99867	0.40799	3.15484	0.05475	0.00749	387.93975	0.04870
Mean	0.08744	127.72480	1.99186	0.40640	3.14124	0.05461	0.00407	387.13047	0.04830
%RSD	0.64261	0.56310	0.48337	0.55248	0.61239	0.36829	118.77059	0.29563	1.17167

ted: 10/11/2011 11:38:22 User: MIKE LUNDGREEN

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.49510	0.26317	0.45809	199.10944	75.58296	0.67996	85.59339	3.45535	0.97688
#2	0.49829	0.26476	0.46228	200.47965	76.15563	0.68541	86.04260	3.47480	0.98323
<b>Mean</b>	<b>0.49670</b>	<b>0.26397</b>	<b>0.46019</b>	<b>199.79455</b>	<b>75.86929</b>	<b>0.68268</b>	<b>85.81800</b>	<b>3.46508</b>	<b>0.98005</b>
%RSD	0.45476	0.42594	0.64366	0.48494	0.53373	0.56481	0.37013	0.39692	0.45806

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	42.08816	0.58285	5.05398	0.65785	0.63558	6.08297	0.26622	1.75656	1.73661
#2	42.37330	0.58612	5.11479	0.65896	0.63662	6.15633	0.26826	1.77462	1.74163
<b>Mean</b>	<b>42.23073</b>	<b>0.58449</b>	<b>5.08439</b>	<b>0.65841</b>	<b>0.63610</b>	<b>6.11965</b>	<b>0.26724</b>	<b>1.76559</b>	<b>1.73912</b>
%RSD	0.47744	0.39641	0.84568	0.11844	0.11567	0.84766	0.53989	0.72328	0.20399

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	10.45682	0.49575	2.85983	0.10643	0.51862	1.91831	0.73573	1.50974	0.90184
#2	10.53537	0.50076	2.88752	0.09819	0.52144	1.92287	0.74346	1.51485	0.90301
<b>Mean</b>	<b>10.49610</b>	<b>0.49826</b>	<b>2.87368</b>	<b>0.10231</b>	<b>0.52003</b>	<b>1.92059</b>	<b>0.73959</b>	<b>1.51230</b>	<b>0.90242</b>
%RSD	0.52915	0.71081	0.68119	5.69777	0.38284	0.16803	0.73873	0.23899	0.09163

	Zr	Pb	Se
	ppm	calc	calc
#1	0.04234	0.64299	1.74326
#2	0.04325	0.64406	1.75262
<b>Mean</b>	<b>0.04279</b>	<b>0.64353</b>	<b>1.74794</b>
%RSD	1.49872	0.11661	0.37866

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:51

SampleId1 : ZZZ

SampleId2 :

[CV]

Analysis commenced : 10/10/2011 15:26:12

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD6

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.19200	51.46931	0.50892	0.99892	0.96511	0.46115	0.53199	50.45776	0.51444
#2	0.19234	51.53848	0.50521	0.99622	0.96255	0.46232	0.54043	50.73153	0.51554
<b>Mean</b>	<b>0.19217</b>	<b>51.50390</b>	<b>0.50707</b>	<b>0.99757</b>	<b>0.96383</b>	<b>0.46173</b>	<b>0.53621</b>	<b>50.59464</b>	<b>0.51499</b>
%RSD	0.12578	0.09497	0.51709	0.19125	0.18775	0.17987	1.11299	0.38262	0.15129

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.47005	0.92785	1.03321	19.56857	48.97020	0.48605	49.76961	0.91625	0.95756
#2	0.47266	0.93088	1.02986	19.62378	48.83768	0.48475	49.89294	0.91878	0.96172
<b>Mean</b>	<b>0.47135</b>	<b>0.92936</b>	<b>1.03153</b>	<b>19.59617</b>	<b>48.90394</b>	<b>0.48540</b>	<b>49.83127</b>	<b>0.91752</b>	<b>0.95964</b>
%RSD	0.39116	0.23079	0.22927	0.19921	0.19161	0.18907	0.17501	0.19510	0.30680

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	48.31926	1.01577	5.02905	0.95086	0.93117	4.95986	0.49490	0.98481	0.95839
#2	48.34686	1.01654	5.06301	0.96158	0.92667	4.93934	0.49568	0.98809	0.95958
Mean	48.33306	1.01615	5.04603	0.95622	0.92892	4.94960	0.49529	0.98645	0.95899
%RSD	0.04038	0.05399	0.47588	0.79286	0.34232	0.29306	0.11181	0.23467	0.08747

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.65773	1.04799	0.48688	0.34231	0.43706	0.53643	4.63082	0.46634	0.91879
#2	4.67015	1.04405	0.48609	0.34011	0.43871	0.53155	4.63310	0.46960	0.92201
Mean	4.66394	1.04602	0.48649	0.34121	0.43789	0.53399	4.63196	0.46797	0.92040
%RSD	0.18834	0.26679	0.11464	0.45594	0.26603	0.64701	0.03476	0.49370	0.24708

	Zr ppm	Pb calc	Se calc
#1	0.97123	0.93772	0.96719
#2	0.97147	0.93829	0.96907
Mean	0.97135	0.93801	0.96813
%RSD	0.01762	0.04303	0.13742

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:51

SampleId1 : ZZZ

SampleId2 :

[CB]

Analysis commenced : 10/10/2011 15:28:07

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00001	0.16868	0.00209	-0.00166	0.00051	0.00108	-0.00517	0.09949	0.00035
#2	0.00023	0.16911	-0.00160	-0.00118	0.00058	0.00102	-0.00257	0.10417	0.00048
Mean	0.00011	0.16890	0.00024	-0.00142	0.00054	0.00105	-0.00387	0.10183	0.00041
%RSD	157.15464	0.17796	1079.80585	23.99462	9.17207	3.85906	47.54310	3.25038	21.92783

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.00008	0.00013	-0.00341	0.04555	-0.03141	0.00402	0.03805	0.00108	0.00046
#2	0.00044	0.00062	-0.00256	0.04679	-0.03164	0.00401	0.04546	0.00116	0.00094
Mean	0.00026	0.00037	-0.00298	0.04617	-0.03152	0.00402	0.04175	0.00112	0.00070
%RSD	98.47410	92.07317	20.25545	1.90852	0.50662	0.10174	12.55230	4.93398	48.06999

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.02508	0.00063	0.00562	0.00077	0.00005	0.00392	0.00121	0.00340	-0.00120
#2	-0.02667	0.00033	-0.00383	0.00474	-0.00009	-0.00773	-0.00235	-0.00154	0.00228
Mean	-0.02587	0.00048	0.00089	0.00275	-0.00002	-0.00190	-0.00057	0.00093	0.00054
%RSD	4.32547	44.07895	748.90533	101.81136	496.15087	433.10250	442.01905	374.86561	456.99777

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01722	0.00343	-0.00195	0.00903	-0.00128	0.00400	-0.00717	-0.00015	0.00147
#2	-0.02064	0.00379	-0.00192	0.00815	-0.00118	0.00518	-0.00659	0.00042	0.00118
<b>Mean</b>	<b>-0.01893</b>	<b>0.00361</b>	<b>-0.00193</b>	<b>0.00859</b>	<b>-0.00123</b>	<b>0.00459</b>	<b>-0.00688</b>	<b>0.00013</b>	<b>0.00132</b>
%RSD	12.79849	6.99867	1.05550	7.23609	5.69938	18.23073	5.92419	297.74541	15.55889

	Zr ppm	Pb calc	Se calc
#1	0.00105	0.00029	0.00033
#2	0.00129	0.00152	0.00101
<b>Mean</b>	<b>0.00117</b>	<b>0.00090</b>	<b>0.00067</b>
%RSD	14.62622	95.94919	72.25317

Method : Paragon File : 111010A  
SampleId1 : CCV SampleId2 :  
**Analysis commenced : 10/10/2011 15:37:37**  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:51  
[CV]

Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19340	52.64615	0.49846	0.98169	0.96934	0.47580	0.50150	50.32482	0.48967
#2	0.19445	52.96746	0.49903	0.99449	0.97705	0.48316	0.51373	51.17620	0.49565
<b>Mean</b>	<b>0.19392</b>	<b>52.80681</b>	<b>0.49875</b>	<b>0.98809</b>	<b>0.97320</b>	<b>0.47948</b>	<b>0.50762</b>	<b>50.75051</b>	<b>0.49266</b>
%RSD	0.38259	0.43025	0.08087	0.91587	0.56049	1.08560	1.70264	1.18622	0.85873

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.47503	0.94842	1.01149	20.04376	48.93963	0.49206	51.24885	0.95170	0.95913
#2	0.48238	0.96401	1.01719	20.32080	49.08758	0.49377	51.76796	0.96548	0.97735
<b>Mean</b>	<b>0.47871</b>	<b>0.95622</b>	<b>1.01434</b>	<b>20.18228</b>	<b>49.01360</b>	<b>0.49291</b>	<b>51.50840</b>	<b>0.95859</b>	<b>0.96824</b>
%RSD	1.08673	1.15356	0.39676	0.97063	0.21343	0.24493	0.71264	1.01601	1.33102

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	49.27064	0.94375	5.18465	0.97765	0.97238	5.22364	0.47221	1.00195	1.00095
#2	49.43540	0.95950	5.28854	0.98996	0.97357	5.27348	0.48612	1.03058	1.00380
<b>Mean</b>	<b>49.35302</b>	<b>0.95162</b>	<b>5.23659</b>	<b>0.98381</b>	<b>0.97297</b>	<b>5.24856</b>	<b>0.47917</b>	<b>1.01626</b>	<b>1.00237</b>
%RSD	0.23607	1.17037	1.40285	0.88463	0.08595	0.67140	2.05234	1.99203	0.20087

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.89246	1.03899	0.48413	0.33715	0.47191	0.51391	4.77631	0.47450	0.97026
#2	4.94123	1.05297	0.48868	0.34779	0.47725	0.51406	4.84209	0.48167	0.99600
<b>Mean</b>	<b>4.91685</b>	<b>1.04598</b>	<b>0.48641</b>	<b>0.34247</b>	<b>0.47458</b>	<b>0.51398</b>	<b>4.80920</b>	<b>0.47808</b>	<b>0.98313</b>
%RSD	0.70135	0.94507	0.66246	2.19697	0.79570	0.02105	0.96713	1.06037	1.85131

	Zr ppm	Pb calc	Se calc
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#1	0.97618	0.97414	1.00128	UNDGREEN
#2	0.98550	0.97902	1.01272	
Mean	0.98084	0.97658	1.00700	
%RSD	0.67196	0.35388	0.80281	

Method : Paragon File : 111010A  
SampleId1 : CCB SampleId2 :  
Analysis commenced : 10/10/2011 15:39:33  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:51  
[CB]

Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00033	0.05717	-0.00075	-0.00118	0.00019	0.00044	0.00101	0.07817	0.00003
#2	0.00004	0.04811	-0.00198	-0.00028	0.00012	0.00039	0.00019	0.06516	0.00009
Mean	0.00019	0.05264	-0.00137	-0.00073	0.00015	0.00041	0.00060	0.07167	0.00006
%RSD	108.77980	12.16996	63.63111	86.48788	32.00485	8.99820	96.03901	12.82861	76.24107

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00041	-0.00052	-0.00067	0.03547	-0.04835	0.00393	0.02817	0.00085	0.00005
#2	-0.00028	-0.00013	-0.00135	0.03039	-0.04428	0.00392	0.02652	0.00069	-0.00117
Mean	-0.00035	-0.00033	-0.00101	0.03293	-0.04632	0.00393	0.02734	0.00077	-0.00056
%RSD	24.77216	83.25019	47.22972	10.92514	6.20640	0.26024	4.25970	14.38461	155.16151

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.02811	-0.00056	-0.00084	-0.00016	0.00145	0.00101	0.00055	0.00452	-0.00033
#2	-0.03017	-0.00184	0.00677	-0.00144	0.00146	0.00392	-0.00125	0.00372	0.00054
Mean	-0.02914	-0.00120	0.00297	-0.00080	0.00146	0.00247	-0.00035	0.00412	0.00010
%RSD	5.00511	75.15304	181.29589	113.42587	0.38315	83.49045	361.90871	13.59556	609.11894

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.01090	-0.00193	-0.00218	-0.00433	-0.00127	-0.00001	-0.00774	-0.00019	-0.00086
#2	-0.01260	-0.00014	-0.00227	0.00311	-0.00124	0.00217	-0.01812	0.00020	-0.00086
Mean	-0.01175	-0.00104	-0.00222	-0.00061	-0.00126	0.00108	-0.01293	0.00001	-0.00086
%RSD	10.24829	121.92554	3.05472	869.10398	1.86227	142.70961	56.79502	3392.23260	0.00000

	Zr ppm	Pb calc	Se calc
#1	0.00204	0.00092	0.00128
#2	0.00150	0.00050	0.00160
Mean	0.00177	0.00071	0.00144
%RSD	21.75156	42.26743	15.57420

Method : Paragon File : 111010A  
SampleId1 : 1109363-1 SampleId2 :  
Analysis commenced : 10/10/2011 15:41:28

Printed : 10/11/2011 11:37:51  
[SAMPLE]

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE59

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00110	90.33464	0.18118	0.04859	1.21015	0.00875	0.00022	367.49429	0.00223
#2	-0.00129	89.73681	0.18942	0.04907	1.20091	0.00871	0.00622	368.34698	0.00222
Mean	-0.00119	90.03572	0.18530	0.04883	1.20553	0.00873	0.00322	367.92063	0.00223
%RSD	11.14908	0.46951	3.14573	0.69881	0.54181	0.29633	131.70345	0.16388	0.15834
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.06316	0.07517	0.20445	180.95868	30.53572	0.13406	43.85005	3.06051	0.13954
#2	0.06314	0.07561	0.20369	181.16381	30.26888	0.13300	43.77046	3.06075	0.13812
Mean	0.06315	0.07539	0.20407	181.06124	30.40230	0.13353	43.81025	3.06063	0.13883
%RSD	0.01470	0.40812	0.26525	0.08011	0.62064	0.55970	0.12846	0.00566	0.72601
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	1.57757	0.11721	5.17110	0.20889	0.21973	6.75519	0.00451	0.11056	0.15000
#2	1.56467	0.11620	5.15447	0.21585	0.21600	6.65241	0.00215	0.12029	0.15186
Mean	1.57112	0.11671	5.16279	0.21237	0.21787	6.70380	0.00333	0.11542	0.15093
%RSD	0.58097	0.61250	0.22783	2.31659	1.20883	1.08405	49.94841	5.96283	0.87160
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	6.00514	0.00491	2.58747	0.10444	0.26783	0.00289	1.00790	0.88856	0.48553
#2	5.99433	0.01027	2.56734	0.11060	0.26792	0.00935	1.00198	0.88647	0.49136
Mean	5.99973	0.00759	2.57740	0.10752	0.26788	0.00612	1.00494	0.88751	0.48844
%RSD	0.12742	49.97302	0.55233	4.05175	0.02402	74.61706	0.41610	0.16648	0.84414
	Zr ppm	Pb calc	Se calc						
#1	0.06074	0.21612	0.13686						
#2	0.05980	0.21595	0.14135						
Mean	0.06027	0.21604	0.13910						
%RSD	1.09998	0.05477	2.27834						

Method : Paragon File : 111010A  
SampleId1 : 1109363-1D SampleId2 :  
Analysis commenced : 10/10/2011 15:43:23  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:51  
[SAMPLE]

Position : TUBE60

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00119	95.17452	0.19596	0.04452	1.19410	0.00921	0.00238	345.83540	0.00280
#2	-0.00139	96.09747	0.19587	0.04514	1.20665	0.00926	0.00239	345.95692	0.00242



<b>Mean</b>	<b>-0.00129</b>	<b>95.63600</b>	<b>0.19591</b>	<b>0.04483</b>	<b>1.20038</b>	<b>0.00923</b>	<b>0.00239</b>	<b>345.89616</b>	<b>0.00261</b>
<b>%RSD</b>	<b>11.01635</b>	<b>0.68240</b>	<b>0.03420</b>	<b>0.97859</b>	<b>0.73946</b>	<b>0.40248</b>	<b>0.27860</b>	<b>0.02484</b>	<b>10.21804</b>
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.06702	0.08110	0.19432	194.32391	31.60400	0.13935	45.81384	3.10141	0.13995
#2	0.06649	0.08067	0.19689	194.56516	31.91499	0.14084	46.01830	3.11218	0.14097
<b>Mean</b>	<b>0.06676</b>	<b>0.08089</b>	<b>0.19560</b>	<b>194.44454</b>	<b>31.75949</b>	<b>0.14009</b>	<b>45.91607</b>	<b>3.10680</b>	<b>0.14046</b>
<b>%RSD</b>	<b>0.56114</b>	<b>0.37945</b>	<b>0.92687</b>	<b>0.08773</b>	<b>0.69242</b>	<b>0.75501</b>	<b>0.31486</b>	<b>0.24533</b>	<b>0.51257</b>
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.50416	0.12292	5.30447	0.21953	0.22274	6.36471	0.00545	0.11391	0.13794
#2	1.52463	0.12152	5.29187	0.22147	0.22394	6.35004	0.00446	0.11265	0.13988
<b>Mean</b>	<b>1.51440</b>	<b>0.12222</b>	<b>5.29817</b>	<b>0.22050</b>	<b>0.22334</b>	<b>6.35737</b>	<b>0.00496</b>	<b>0.11328</b>	<b>0.13891</b>
<b>%RSD</b>	<b>0.95596</b>	<b>0.80851</b>	<b>0.16822</b>	<b>0.62303</b>	<b>0.37925</b>	<b>0.16324</b>	<b>14.09650</b>	<b>0.78618</b>	<b>0.98751</b>
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	5.68954	0.01277	2.29106	0.12078	0.26360	0.01065	0.72167	0.92703	0.51818
#2	5.72953	0.00813	2.31183	0.11560	0.26440	0.00729	0.72555	0.92953	0.51352
<b>Mean</b>	<b>5.70953</b>	<b>0.01045</b>	<b>2.30144</b>	<b>0.11819</b>	<b>0.26400</b>	<b>0.00897</b>	<b>0.72361</b>	<b>0.92828</b>	<b>0.51585</b>
<b>%RSD</b>	<b>0.49531</b>	<b>31.44761</b>	<b>0.63823</b>	<b>3.09442</b>	<b>0.21274</b>	<b>26.46075</b>	<b>0.37885</b>	<b>0.19013</b>	<b>0.63954</b>
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.05894	0.22167	0.12994						
#2	0.05941	0.22312	0.13082						
<b>Mean</b>	<b>0.05917</b>	<b>0.22240</b>	<b>0.13038</b>						
<b>%RSD</b>	<b>0.56642</b>	<b>0.45974</b>	<b>0.47431</b>						

Method : Paragon File : 111010A  
SampleId1 : 1109363-1L 5X SampleId2 :  
Analysis commenced : 10/10/2011 15:45:18  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:52  
[SAMPLE]  
Position : TUBE61

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00063	18.08628	0.03935	0.00675	0.24548	0.00203	-0.00263	71.51329	0.00011
#2	-0.00005	18.04461	0.03831	0.00750	0.24562	0.00200	-0.00149	71.54916	-0.00004
<b>Mean</b>	<b>-0.00034</b>	<b>18.06545</b>	<b>0.03883</b>	<b>0.00712</b>	<b>0.24555</b>	<b>0.00201</b>	<b>-0.00206</b>	<b>71.53122</b>	<b>0.00004</b>
<b>%RSD</b>	<b>121.03938</b>	<b>0.16308</b>	<b>1.89495</b>	<b>7.52459</b>	<b>0.04053</b>	<b>1.19004</b>	<b>39.12578</b>	<b>0.03546</b>	<b>277.07600</b>
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.01231	0.01477	0.03852	34.70690	4.95721	0.02467	9.21810	0.64846	0.02664
#2	0.01231	0.01573	0.03851	34.71703	4.93579	0.02455	9.22058	0.64925	0.02847
<b>Mean</b>	<b>0.01231</b>	<b>0.01525</b>	<b>0.03852</b>	<b>34.71197</b>	<b>4.94650</b>	<b>0.02461</b>	<b>9.21934</b>	<b>0.64885</b>	<b>0.02755</b>

%RSD	0.00083	4.47882	0.01562	0.02064	0.30613	0.34868	0.01904	0.08586	4.69944
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.20648	0.02464	1.09445	0.04373	0.04570	1.40658	-0.00206	0.02021	0.03524
#2	0.20456	0.02381	1.07936	0.04536	0.04512	1.40658	0.00129	0.02167	0.03030
<b>Mean</b>	<b>0.20552</b>	<b>0.02422</b>	<b>1.08691</b>	<b>0.04455</b>	<b>0.04541</b>	<b>1.40658</b>	<b>-0.00038</b>	<b>0.02094</b>	<b>0.03277</b>
%RSD	0.66197	2.42932	0.98152	2.57957	0.89859	0.00000	614.96734	4.94649	10.65883
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.06448	-0.00056	0.52370	0.02045	0.05370	0.00165	0.18274	0.18437	0.10670
#2	1.06104	0.00051	0.52348	0.02617	0.05373	0.00111	0.19370	0.18539	0.10583
<b>Mean</b>	<b>1.06276</b>	<b>-0.00003</b>	<b>0.52359</b>	<b>0.02331</b>	<b>0.05372</b>	<b>0.00138</b>	<b>0.18822</b>	<b>0.18488</b>	<b>0.10627</b>
%RSD	0.22904	2699.35758	0.02896	17.36101	0.03265	27.50315	4.11660	0.39265	0.58052
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.01266	0.04505	0.03024						
#2	0.01227	0.04520	0.02743						
<b>Mean</b>	<b>0.01246</b>	<b>0.04512</b>	<b>0.02883</b>						
%RSD	2.20261	0.24482	6.88453						

Method : Paragon File : 111010A  
SampleId1 : 1109363-1MS SampleId2 :  
Analysis commenced : 10/10/2011 15:47:08  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:52  
[SAMPLE]

Position : TUBE62

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.08744	128.58245	1.97530	0.39943	3.13276	0.05494	0.00604	387.55520	0.04818
#2	0.08788	130.17276	1.97965	0.39957	3.16553	0.05510	0.00817	388.62420	0.04746
<b>Mean</b>	<b>0.08766</b>	<b>129.37760</b>	<b>1.97748</b>	<b>0.39950</b>	<b>3.14915</b>	<b>0.05502</b>	<b>0.00710</b>	<b>388.08970</b>	<b>0.04782</b>
%RSD	0.35458	0.86918	0.15537	0.02444	0.73589	0.21067	21.19000	0.19477	1.06055
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.50168	0.26960	0.45236	205.25315	74.81731	0.68345	87.31984	3.57353	0.98049
#2	0.50500	0.27006	0.45630	205.99751	75.69756	0.69220	87.87657	3.59342	0.98398
<b>Mean</b>	<b>0.50334</b>	<b>0.26983</b>	<b>0.45433</b>	<b>205.62533</b>	<b>75.25743</b>	<b>0.68782</b>	<b>87.59820</b>	<b>3.58348</b>	<b>0.98224</b>
%RSD	0.46669	0.11948	0.61214	0.25597	0.82707	0.89924	0.44940	0.39255	0.25064
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	42.51997	0.56515	5.22981	0.66696	0.65617	6.37352	0.25884	1.78407	1.79809
#2	43.04103	0.56575	5.29805	0.66572	0.66428	6.44103	0.25830	1.81314	1.80839
<b>Mean</b>	<b>42.78050</b>	<b>0.56545</b>	<b>5.26393</b>	<b>0.66634</b>	<b>0.66023</b>	<b>6.40727</b>	<b>0.25857</b>	<b>1.79861</b>	<b>1.80324</b>
%RSD	0.86124	0.07450	0.91668	0.13159	0.86898	0.74509	0.14536	1.14284	0.40405

ted: 10/11/2011 11:38:22 User: MIKE LUNDGREEN

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	10.77527	0.49501	2.86189	0.10263	0.54527	1.88418	0.72982	1.52497	0.95885
#2	10.88174	0.49393	2.88652	0.11052	0.54901	1.88622	0.73624	1.53530	0.96587
Mean	10.82850	0.49447	2.87421	0.10657	0.54714	1.88520	0.73303	1.53014	0.96236
%RSD	0.69528	0.15420	0.60599	5.23058	0.48378	0.07629	0.61938	0.47764	0.51573

	Zr	Pb	Se
	ppm	calc	calc
#1	0.04460	0.65976	1.79342
#2	0.04407	0.66476	1.80997
Mean	0.04434	0.66226	1.80170
%RSD	0.85354	0.53374	0.64964

Method : Paragon File : 111010A  
 SampleId1 : 1109363-1MSD SampleId2 :  
 Analysis commenced : 10/10/2011 15:48:59  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:52  
 [SAMPLE]

Position : TUBE63

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.08801	124.43219	1.96073	0.39529	3.08379	0.05470	0.00519	382.91919	0.04692
#2	0.08797	124.35775	1.96826	0.39329	3.08390	0.05475	0.00811	384.08052	0.04860
Mean	0.08799	124.39497	1.96449	0.39429	3.08385	0.05473	0.00665	383.49986	0.04776
%RSD	0.03751	0.04231	0.27105	0.35899	0.00252	0.05767	31.05358	0.21413	2.49343

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.50106	0.26707	0.45079	200.83172	73.77135	0.67982	86.15051	3.52341	0.98684
#2	0.50233	0.26718	0.44874	201.66296	73.56204	0.67770	86.19050	3.53401	0.99394
Mean	0.50169	0.26712	0.44976	201.24734	73.66669	0.67876	86.17051	3.52871	0.99039
%RSD	0.17943	0.02885	0.32282	0.29207	0.20091	0.22039	0.03281	0.21234	0.50693

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	42.54316	0.55714	5.14187	0.66708	0.65742	6.31188	0.27349	1.79271	1.79504
#2	42.41841	0.55863	5.13760	0.66260	0.66232	6.34123	0.27745	1.77405	1.80484
Mean	42.48078	0.55789	5.13974	0.66484	0.65987	6.32655	0.27547	1.78338	1.79994
%RSD	0.20765	0.18876	0.05884	0.47583	0.52555	0.32805	1.01491	0.73979	0.38509

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	8.27833	0.49754	2.79589	0.09630	0.51979	1.86966	0.76920	1.52148	0.94979
#2	8.26913	0.49109	2.80133	0.10417	0.52178	1.87345	0.76748	1.52591	0.95944
Mean	8.27373	0.49432	2.79861	0.10024	0.52079	1.87156	0.76834	1.52369	0.95461
%RSD	0.07860	0.92210	0.13750	5.55059	0.27097	0.14316	0.15835	0.20591	0.71485

	<b>Zr</b>	<b>Pb</b>	<b>SeUNDGREEN</b>
	ppm	calc	calc
#1	0.04239	0.66063	1.79426
#2	0.04208	0.66241	1.79459
<b>Mean</b>	<b>0.04224</b>	<b>0.66152</b>	<b>1.79443</b>
%RSD	0.52774	0.19042	0.01281

Method : Paragon File : 111010A  
SampleId1 : CCV SampleId2 :  
Analysis commenced : 10/10/2011 15:50:49  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:52  
[CV]

Position : STD6

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.19524	52.93244	0.50521	0.99373	0.97784	0.48663	0.50867	51.70113	0.50264
#2	0.19548	53.01579	0.49827	0.99947	0.97844	0.48623	0.51178	51.65386	0.50009
<b>Mean</b>	<b>0.19536</b>	<b>52.97412</b>	<b>0.50174</b>	<b>0.99660</b>	<b>0.97814</b>	<b>0.48643</b>	<b>0.51022</b>	<b>51.67750</b>	<b>0.50136</b>
%RSD	0.09023	0.11126	0.97811	0.40741	0.04369	0.05752	0.43040	0.06469	0.36049

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.48506	0.96972	1.01802	20.41641	49.11301	0.49333	51.77092	0.97054	0.98623
#2	0.48652	0.97156	1.02029	20.39160	49.08611	0.49385	51.88000	0.96991	0.98363
<b>Mean</b>	<b>0.48579</b>	<b>0.97064</b>	<b>1.01916</b>	<b>20.40400</b>	<b>49.09956</b>	<b>0.49359</b>	<b>51.82546</b>	<b>0.97023</b>	<b>0.98493</b>
%RSD	0.21258	0.13414	0.15769	0.08596	0.03874	0.07437	0.14883	0.04616	0.18624

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	49.49281	0.97089	5.24717	0.98892	1.01976	5.22951	0.48001	1.01161	1.01492
#2	49.50988	0.97134	5.27451	0.99342	0.99190	5.25003	0.48353	1.00702	1.00940
<b>Mean</b>	<b>49.50134</b>	<b>0.97112</b>	<b>5.26084</b>	<b>0.99117</b>	<b>1.00583</b>	<b>5.23977</b>	<b>0.48177</b>	<b>1.00932</b>	<b>1.01216</b>
%RSD	0.02438	0.03258	0.36752	0.32102	1.95815	0.27692	0.51678	0.32157	0.38547

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.91991	1.04902	0.48758	0.35655	0.47627	0.51369	4.75870	0.48098	1.00565
#2	4.93709	1.06947	0.48758	0.35415	0.47618	0.52589	4.81195	0.48303	1.00595
<b>Mean</b>	<b>4.92850</b>	<b>1.05924</b>	<b>0.48758</b>	<b>0.35535</b>	<b>0.47623</b>	<b>0.51979</b>	<b>4.78532</b>	<b>0.48200</b>	<b>1.00580</b>
%RSD	0.24653	1.36462	0.00000	0.47824	0.01352	1.65989	0.78688	0.30052	0.02057

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.98797	1.00949	1.01382
#2	0.99021	0.99241	1.00861
<b>Mean</b>	<b>0.98909</b>	<b>1.00095</b>	<b>1.01121</b>
%RSD	0.15996	1.20660	0.36423

Method : Paragon File : 111010A

Printed : 10/11/2011 11:37:52

SampleId1 : CCB                      SampleId2 :  
 Analysis commenced : 10/10/2011 15:52:55  
 Dilution ratio : 1.00000 to 1.00000      Tray :

[CB]  
 Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00028	0.00985	0.00095	-0.00242	-0.00048	0.00017	0.00117	0.00172	-0.00026
#2	-0.00103	0.01256	0.00303	-0.00221	-0.00062	0.00017	-0.00030	-0.00192	-0.00027
Mean	-0.00037	0.01121	0.00199	-0.00232	-0.00055	0.00017	0.00043	-0.00010	-0.00027
%RSD	248.36603	17.15276	73.88945	6.30807	18.15269	1.60842	237.99032	2554.56226	3.76385
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00029	-0.00073	-0.00212	0.00578	-0.04022	0.00381	-0.01342	-0.00017	-0.00062
#2	-0.00138	-0.00078	-0.00178	0.00474	-0.05625	0.00379	-0.01878	-0.00025	-0.00022
Mean	-0.00083	-0.00076	-0.00195	0.00526	-0.04824	0.00380	-0.01610	-0.00021	-0.00042
%RSD	92.85935	4.67787	12.61535	13.95143	23.50647	0.42983	23.50996	26.49818	68.39632
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.05558	-0.00089	-0.00291	0.00313	-0.00027	-0.02521	-0.00424	-0.00310	-0.00020
#2	-0.05726	-0.00134	-0.00522	-0.00287	0.00001	-0.02813	-0.00357	-0.00143	0.00031
Mean	-0.05642	-0.00111	-0.00407	0.00013	-0.00013	-0.02667	-0.00390	-0.00227	0.00006
%RSD	2.10307	28.31580	40.10973	3202.22269	157.53781	7.72523	12.15886	52.24796	607.00251
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.01721	0.00057	-0.00287	-0.00724	-0.00152	0.00580	-0.01291	-0.00012	-0.00115
#2	-0.01677	-0.00229	-0.00290	-0.00371	-0.00164	-0.00039	-0.02041	-0.00065	-0.00086
Mean	-0.01699	-0.00086	-0.00288	-0.00548	-0.00158	0.00270	-0.01666	-0.00039	-0.00100
%RSD	1.83727	235.82634	0.70714	45.58801	5.54214	162.04106	31.83738	97.13814	20.46454
	Zr ppm	Pb calc	Se calc						
#1	0.00171	0.00086	-0.00116						
#2	0.00117	-0.00095	-0.00027						
Mean	0.00144	-0.00004	-0.00072						
%RSD	26.51871	2998.57866	88.65511						

Method : Paragon                      File : 111010A  
 SampleId1 : 1109363-2              SampleId2 :  
 Analysis commenced : 10/10/2011 15:54:53  
 Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:37:53  
 [SAMPLE]  
 Position : TUBE64

Final concentrations

Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
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#1	-0.00100	22.27399	0.05118	0.01453	0.37656	0.00310	0.00119	86.76756	0.00037
#2	-0.00041	22.24126	0.05487	0.01281	0.37702	0.00312	0.00459	87.09746	0.00052
<b>Mean</b>	<b>-0.00070</b>	<b>22.25763</b>	<b>0.05302</b>	<b>0.01367</b>	<b>0.37679</b>	<b>0.00311</b>	<b>0.00289</b>	<b>86.93251</b>	<b>0.00045</b>
%RSD	59.11929	0.10397	4.92103	8.91162	0.08600	0.38771	83.38327	0.26834	23.16755

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	0.02600	0.02071	0.04227	92.56438	11.02114	0.03360	17.15285	1.43092	0.04814
#2	0.02666	0.02071	0.04202	92.97195	11.00779	0.03356	17.17279	1.43722	0.04828
<b>Mean</b>	<b>0.02633</b>	<b>0.02071</b>	<b>0.04215</b>	<b>92.76816</b>	<b>11.01446</b>	<b>0.03358</b>	<b>17.16282</b>	<b>1.43407</b>	<b>0.04821</b>
%RSD	1.78888	0.00160	0.43168	0.31067	0.08571	0.07299	0.08216	0.31053	0.19899

	<b>Na</b> ppm	<b>Ni</b> ppm	<b>P</b> ppm	<b>Pb I</b> ppm	<b>Pb II</b> ppm	<b>S</b> ppm	<b>Sb</b> ppm	<b>Se I</b> ppm	<b>Se II</b> ppm
#1	0.49651	0.03504	2.49197	0.08400	0.09153	13.06212	-0.00015	0.01147	0.03177
#2	0.49467	0.03513	2.47185	0.08624	0.08908	13.07691	0.00096	0.01175	0.03439
<b>Mean</b>	<b>0.49559</b>	<b>0.03509</b>	<b>2.48191</b>	<b>0.08512</b>	<b>0.09030</b>	<b>13.06951</b>	<b>0.00040</b>	<b>0.01161</b>	<b>0.03308</b>
%RSD	0.26171	0.17970	0.57338	1.86830	1.91828	0.08001	195.93842	1.76051	5.61272

	<b>Si</b> ppm	<b>Sn</b> ppm	<b>Sr</b> ppm	<b>Th</b> ppm	<b>Ti</b> ppm	<b>Tl</b> ppm	<b>U</b> ppm	<b>V</b> ppm	<b>Zn</b> ppm
#1	4.14805	0.00004	0.32043	0.05197	0.14554	-0.00531	0.41864	0.15562	0.22948
#2	4.14848	-0.00317	0.32089	0.05486	0.14618	-0.00141	0.41951	0.15641	0.23734
<b>Mean</b>	<b>4.14826</b>	<b>-0.00156</b>	<b>0.32066</b>	<b>0.05342</b>	<b>0.14586</b>	<b>-0.00336</b>	<b>0.41908</b>	<b>0.15602</b>	<b>0.23341</b>
%RSD	0.00733	145.38066	0.10046	3.82781	0.30872	82.14459	0.14795	0.35599	2.38076

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.02666	0.08902	0.02501
#2	0.02656	0.08813	0.02686
<b>Mean</b>	<b>0.02661</b>	<b>0.08858</b>	<b>0.02593</b>
%RSD	0.27511	0.70655	5.03838

Method : Paragon      File : 111010A  
SampleId1 : 1109363-3      SampleId2 :  
Analysis commenced : 10/10/2011 15:56:43  
Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:37:53  
[SAMPLE]

Position : TUBE65

Final concentrations

	<b>Ag</b> ppm	<b>Al</b> ppm	<b>As</b> ppm	<b>B</b> ppm	<b>Ba</b> ppm	<b>Be</b> ppm	<b>Bi</b> ppm	<b>Ca</b> ppm	<b>Cd</b> ppm
#1	-0.00052	26.13828	0.03623	0.01357	0.50177	0.00341	0.00583	78.49757	0.00090
#2	-0.00126	26.16087	0.03576	0.01398	0.50205	0.00339	-0.00505	78.25531	0.00084
<b>Mean</b>	<b>-0.00089</b>	<b>26.14957</b>	<b>0.03599</b>	<b>0.01378</b>	<b>0.50191</b>	<b>0.00340</b>	<b>0.00039</b>	<b>78.37644</b>	<b>0.00087</b>
%RSD	58.28457	0.06108	0.92923	2.12274	0.03980	0.32790	1972.91944	0.21856	5.30252

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	0.03408	0.02556	0.04582	100.87620	10.78984	0.03916	25.84108	1.53958	0.00602

#2	0.03317	0.02529	0.04471	100.72211	10.79927	0.03918	25.82397	1.53878	0.00507
<b>Mean</b>	<b>0.03363</b>	<b>0.02543</b>	<b>0.04527</b>	<b>100.79915</b>	<b>10.79456</b>	<b>0.03917</b>	<b>25.83252</b>	<b>1.53918</b>	<b>0.00555</b>
%RSD	1.90158	0.74914	1.73575	0.10810	0.06180	0.03651	0.04683	0.03668	12.10275

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	0.27799	0.04331	3.16730	0.06621	0.06286	3.34957	0.00244	-0.00282	0.01239
#2	0.27837	0.04348	3.19197	0.06302	0.06767	3.36127	0.00066	0.00269	0.01454
<b>Mean</b>	<b>0.27818</b>	<b>0.04340</b>	<b>3.17963</b>	<b>0.06462</b>	<b>0.06527</b>	<b>3.35542</b>	<b>0.00155</b>	<b>-0.00007</b>	<b>0.01346</b>
%RSD	0.09790	0.29061	0.54865	3.48927	5.20794	0.24657	81.52830	5658.57214	11.28459

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.68377	0.00289	0.28532	0.05924	0.16106	0.00191	0.03555	0.09296	0.24752
#2	3.67817	0.00396	0.28566	0.05810	0.15888	0.00093	0.03450	0.09236	0.24956
<b>Mean</b>	<b>3.68097</b>	<b>0.00342</b>	<b>0.28549</b>	<b>0.05867</b>	<b>0.15997</b>	<b>0.00142</b>	<b>0.03502</b>	<b>0.09266</b>	<b>0.24854</b>
%RSD	0.10763	22.20573	0.08395	1.36927	0.96151	48.53657	2.11835	0.45390	0.57970

	Zr ppm	Pb calc	Se calc
#1	0.02378	0.06398	0.00732
#2	0.02336	0.06612	0.01059
<b>Mean</b>	<b>0.02357</b>	<b>0.06505</b>	<b>0.00896</b>
%RSD	1.27763	2.33111	25.79894

Method : Paragon File : 111010A  
SampleId1 : 1109363-4 SampleId2 :  
Analysis commenced : 10/10/2011 15:58:34  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:53  
[SAMPLE]

Position : TUBE66

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00118	26.83692	0.04247	0.01095	0.43206	0.00390	-0.00178	74.58292	0.00059
#2	-0.00074	26.94481	0.04247	0.01240	0.43288	0.00391	0.00227	74.85260	0.00067
<b>Mean</b>	<b>-0.00096</b>	<b>26.89086</b>	<b>0.04247</b>	<b>0.01167</b>	<b>0.43247</b>	<b>0.00390</b>	<b>0.00024</b>	<b>74.71776</b>	<b>0.00063</b>
%RSD	32.63647	0.28370	0.00000	8.76745	0.13267	0.30950	1183.55750	0.25522	9.62402

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.03799	0.02661	0.05266	122.41490	8.22905	0.03993	22.24760	1.58310	0.00439
#2	0.03860	0.02693	0.05206	122.87804	8.25265	0.04004	22.29175	1.58790	0.00487
<b>Mean</b>	<b>0.03830</b>	<b>0.02677</b>	<b>0.05236</b>	<b>122.64647</b>	<b>8.24085</b>	<b>0.03999</b>	<b>22.26968</b>	<b>1.58550</b>	<b>0.00463</b>
%RSD	1.12301	0.85929	0.80589	0.26702	0.20249	0.19923	0.14020	0.21379	7.24750

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	0.30009	0.04854	2.66266	0.06716	0.06800	3.39344	0.00264	-0.01095	0.01457
#2	0.30100	0.04821	2.69289	0.06594	0.06948	3.37004	0.00130	-0.01997	0.01103

<b>Mean</b>	<b>0.30055</b>	<b>0.04837</b>	<b>2.67777</b>	<b>0.06655</b>	<b>0.06874</b>	<b>3.38174</b>	<b>0.00197</b>	<b>-0.01546</b>	<b>0.01280</b>
<b>%RSD</b>	0.21527	0.47795	0.79807	1.29738	1.52573	0.48931	47.85306	41.25832	19.54599
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	2.16360	0.00075	0.32932	0.06709	0.15634	0.00262	0.04627	0.09950	0.28071
#2	2.17188	0.00325	0.33005	0.06865	0.15593	-0.00092	0.04365	0.10026	0.28333
<b>Mean</b>	<b>2.16774</b>	<b>0.00200</b>	<b>0.32969</b>	<b>0.06787</b>	<b>0.15614</b>	<b>0.00085</b>	<b>0.04496</b>	<b>0.09988</b>	<b>0.28202</b>
<b>%RSD</b>	0.27017	88.59374	0.15597	1.62808	0.18728	295.76158	4.12632	0.53850	0.65700
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.02697	0.06772	0.00607						
#2	0.02711	0.06830	0.00071						
<b>Mean</b>	<b>0.02704</b>	<b>0.06801</b>	<b>0.00339</b>						
<b>%RSD</b>	0.37291	0.60585	111.93429						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:53

SampleId1 : 1109363-5

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 16:00:25

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE67

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00057	25.28537	0.04181	0.00999	0.42459	0.00354	-0.00134	69.86688	0.00064
#2	-0.00092	25.46291	0.04058	0.00943	0.42857	0.00358	0.00662	70.06136	0.00058
<b>Mean</b>	<b>-0.00075</b>	<b>25.37414</b>	<b>0.04120</b>	<b>0.00971</b>	<b>0.42658</b>	<b>0.00356</b>	<b>0.00264</b>	<b>69.96412</b>	<b>0.00061</b>
<b>%RSD</b>	33.21557	0.49477	2.11097	4.01569	0.66074	0.77562	213.07706	0.19655	6.94132
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.03703	0.02559	0.04668	102.36757	7.73759	0.03773	21.38013	1.42438	0.00338
#2	0.03613	0.02491	0.04770	102.76602	7.79780	0.03807	21.54377	1.43132	0.00338
<b>Mean</b>	<b>0.03658</b>	<b>0.02525</b>	<b>0.04719</b>	<b>102.56679</b>	<b>7.76770</b>	<b>0.03790</b>	<b>21.46195</b>	<b>1.42785</b>	<b>0.00338</b>
<b>%RSD</b>	1.75067	1.90217	1.52818	0.27469	0.54808	0.62519	0.53913	0.34343	0.00000
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.31266	0.04524	2.55587	0.06002	0.06166	3.17993	-0.00103	-0.00570	0.01334
#2	0.31608	0.04732	2.56969	0.06394	0.06360	3.19163	0.00343	-0.01291	0.00921
<b>Mean</b>	<b>0.31437</b>	<b>0.04628</b>	<b>2.56278</b>	<b>0.06198</b>	<b>0.06263</b>	<b>3.18578</b>	<b>0.00120</b>	<b>-0.00930</b>	<b>0.01128</b>
<b>%RSD</b>	0.76917	3.17923	0.38113	4.46763	2.19003	0.25965	263.06713	54.83169	25.91554
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	2.49896	-0.00210	0.31935	0.07249	0.14604	-0.00023	0.02761	0.08816	0.25451
#2	2.52164	0.00433	0.32204	0.06884	0.14696	-0.00561	0.03599	0.08930	0.25509
<b>Mean</b>	<b>2.51030</b>	<b>0.00111</b>	<b>0.32069</b>	<b>0.07066</b>	<b>0.14650</b>	<b>-0.00292</b>	<b>0.03180</b>	<b>0.08873</b>	<b>0.25480</b>



%RSD	0.63880	407.94338	0.59417	3.65741	0.44709	130.48141	18.64465	0.90564	0.16157
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	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.02480	0.06112	0.00700
#2	0.02506	0.06371	0.00184
<b>Mean</b>	<b>0.02493</b>	<b>0.06241</b>	<b>0.00442</b>
%RSD	0.74929	2.94320	82.45004

Method : Paragon File : 111010A  
SampleId1 : 1109363-6 SampleId2 :  
Analysis commenced : 10/10/2011 16:02:16  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:53

[SAMPLE]

Position : TUBE68

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00048	27.74381	0.03680	0.01764	0.51060	0.00367	0.00374	86.44481	0.00054
#2	-0.00106	28.03222	0.04181	0.01750	0.51300	0.00366	0.00374	85.72287	0.00083
<b>Mean</b>	<b>-0.00077</b>	<b>27.88801</b>	<b>0.03931</b>	<b>0.01757</b>	<b>0.51180</b>	<b>0.00366</b>	<b>0.00374</b>	<b>86.08384</b>	<b>0.00069</b>
%RSD	53.54522	0.73129	9.02038	0.55489	0.33181	0.09940	0.03192	0.59301	30.04808

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.03063	0.02742	0.05077	103.09270	13.80866	0.04151	25.85568	1.40884	0.00453
#2	0.03063	0.02696	0.05121	102.55689	13.96757	0.04198	25.93372	1.40517	0.00317
<b>Mean</b>	<b>0.03063</b>	<b>0.02719</b>	<b>0.05099</b>	<b>102.82479</b>	<b>13.88812</b>	<b>0.04174</b>	<b>25.89470</b>	<b>1.40701</b>	<b>0.00385</b>
%RSD	0.00716	1.17710	0.60575	0.36847	0.80908	0.78781	0.21310	0.18422	24.89977

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.30317	0.04675	3.02122	0.06439	0.06600	3.45780	0.00107	-0.00935	0.01603
#2	0.30934	0.04470	3.02498	0.06067	0.06619	3.48413	0.00040	-0.00100	0.01607
<b>Mean</b>	<b>0.30625</b>	<b>0.04573</b>	<b>3.02310</b>	<b>0.06253</b>	<b>0.06610</b>	<b>3.47097</b>	<b>0.00074</b>	<b>-0.00518</b>	<b>0.01605</b>
%RSD	1.42329	3.17149	0.08785	4.20586	0.20053	0.53638	64.69870	114.03591	0.16283

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	5.71939	0.00145	0.29031	0.07028	0.16413	0.00100	0.04904	0.09618	0.26674
#2	5.75561	0.00324	0.29134	0.06551	0.16425	0.00222	0.03729	0.09540	0.26266
<b>Mean</b>	<b>5.73750</b>	<b>0.00235</b>	<b>0.29083</b>	<b>0.06790</b>	<b>0.16419</b>	<b>0.00161</b>	<b>0.04316</b>	<b>0.09579</b>	<b>0.26470</b>
%RSD	0.44647	53.87556	0.25197	4.97203	0.05343	53.86928	19.25420	0.57188	1.08876

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.02212	0.06547	0.00758
#2	0.02232	0.06435	0.01038
<b>Mean</b>	<b>0.02222</b>	<b>0.06491</b>	<b>0.00898</b>
%RSD	0.65346	1.21305	22.07631

ted: 10/11/2011 11:38:22 User: MIKE LUNDGREEN  
 Method : Paragon File : 111010A  
 SampleId1 : 1109363-7 SampleId2 :  
 Analysis commenced : 10/10/2011 16:04:07  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:53  
 [SAMPLE]  
 Position : TUBE69

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00159	28.29106	0.04361	0.00943	0.55833	0.00393	0.00082	87.12759	0.00056
#2	-0.00130	28.36491	0.04229	0.00971	0.55932	0.00386	0.00065	86.96788	0.00043
Mean	-0.00145	28.32799	0.04295	0.00957	0.55883	0.00389	0.00074	87.04774	0.00050
%RSD	14.50332	0.18434	2.18075	2.03676	0.12521	1.27618	15.50060	0.12973	18.18720
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.03968	0.02724	0.05127	113.12849	6.28420	0.04384	25.02416	1.45739	0.00704
#2	0.03895	0.02697	0.05127	112.95958	6.30018	0.04391	25.00497	1.45747	0.00772
Mean	0.03932	0.02711	0.05127	113.04404	6.29219	0.04387	25.01456	1.45743	0.00738
%RSD	1.30909	0.70105	0.00235	0.10565	0.17963	0.11174	0.05424	0.00387	6.49949
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	0.34648	0.05062	2.75007	0.06495	0.06949	4.80455	-0.00024	-0.00962	0.01022
#2	0.34696	0.05020	2.72991	0.06502	0.06929	4.85143	-0.00101	-0.00545	0.01607
Mean	0.34672	0.05041	2.73999	0.06499	0.06939	4.82799	-0.00062	-0.00753	0.01314
%RSD	0.09827	0.58374	0.52015	0.07463	0.20254	0.68662	87.43951	39.09099	31.47246
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.81275	-0.00390	0.36981	0.06841	0.15733	-0.00363	0.06991	0.10314	0.27052
#2	4.82290	0.00003	0.37019	0.06819	0.15820	0.00148	0.06771	0.10332	0.27110
Mean	4.81783	-0.00194	0.37000	0.06830	0.15777	-0.00108	0.06881	0.10323	0.27081
%RSD	0.14900	143.54569	0.07234	0.22744	0.39294	336.60097	2.25385	0.12270	0.15203
	Zr ppm	Pb calc	Se calc						
#1	0.02803	0.06798	0.00361						
#2	0.02787	0.06787	0.00890						
Mean	0.02795	0.06792	0.00626						
%RSD	0.41019	0.11424	59.76042						

Method : Paragon File : 111010A  
 SampleId1 : 1109363-8 SampleId2 :  
 Analysis commenced : 10/10/2011 16:05:59  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:54  
 [SAMPLE]  
 Position : TUBE70

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00096	25.14425	0.04862	0.00737	0.62395	0.00364	0.00070	88.13920	0.00082
#2	0.00006	25.17062	0.05496	0.00764	0.62339	0.00361	0.00314	88.63785	0.00079
<b>Mean</b>	<b>-0.00045</b>	<b>25.15743</b>	<b>0.05179</b>	<b>0.00750</b>	<b>0.62367</b>	<b>0.00362</b>	<b>0.00192</b>	<b>88.38853</b>	<b>0.00081</b>
%RSD	159.25948	0.07412	8.65473	2.59799	0.06417	0.71368	89.98265	0.39892	2.30190

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.03125	0.02342	0.04487	105.00902	5.83933	0.03740	20.79690	1.58822	0.05174
#2	0.03155	0.02400	0.04512	105.51731	5.82176	0.03727	20.83728	1.59469	0.05058
<b>Mean</b>	<b>0.03140</b>	<b>0.02371</b>	<b>0.04500</b>	<b>105.26317</b>	<b>5.83054</b>	<b>0.03734</b>	<b>20.81709</b>	<b>1.59145</b>	<b>0.05116</b>
%RSD	0.68095	1.74948	0.38678	0.34145	0.21307	0.23526	0.13714	0.28757	1.59392

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	0.31569	0.04497	2.39160	0.06290	0.06481	5.63414	0.00129	0.01652	0.03197
#2	0.31439	0.04536	2.36541	0.06284	0.06567	5.64000	0.00239	0.02286	0.03759
<b>Mean</b>	<b>0.31504</b>	<b>0.04516</b>	<b>2.37850</b>	<b>0.06287</b>	<b>0.06524</b>	<b>5.63707</b>	<b>0.00184</b>	<b>0.01969</b>	<b>0.03478</b>
%RSD	0.29188	0.60500	0.77872	0.06886	0.93150	0.07358	42.09386	22.77607	11.43672

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	8.27695	-0.00285	0.31960	0.06368	0.17749	0.00096	0.15623	0.12840	0.23937
#2	8.29777	0.00394	0.31918	0.06059	0.17747	-0.00382	0.16973	0.12917	0.24432
<b>Mean</b>	<b>8.28736</b>	<b>0.00054</b>	<b>0.31939</b>	<b>0.06214</b>	<b>0.17748</b>	<b>-0.00143</b>	<b>0.16298</b>	<b>0.12879</b>	<b>0.24185</b>
%RSD	0.17760	884.64848	0.09228	3.52194	0.00989	236.48151	5.85902	0.42251	1.44676

	Zr ppm	Pb calc	Se calc
#1	0.02634	0.06417	0.02682
#2	0.02712	0.06472	0.03269
<b>Mean</b>	<b>0.02673</b>	<b>0.06445</b>	<b>0.02975</b>
%RSD	2.04961	0.60655	13.93510

Method : Paragon File : 111010A  
SampleId1 : CCV SampleId2 :  
Analysis commenced : 10/10/2011 16:08:21  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:54  
[CV]

Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19382	52.49653	0.50350	0.99615	0.97130	0.48214	0.51971	51.42338	0.50257
#2	0.19425	52.46482	0.50160	0.99975	0.97350	0.48274	0.52101	51.47316	0.50350
<b>Mean</b>	<b>0.19404</b>	<b>52.48068</b>	<b>0.50255</b>	<b>0.99795</b>	<b>0.97240</b>	<b>0.48244</b>	<b>0.52036</b>	<b>51.44827</b>	<b>0.50303</b>
%RSD	0.15856	0.04272	0.26755	0.25490	0.16027	0.08748	0.17668	0.06842	0.13115

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.48343	0.96325	1.02120	20.25254	48.58617	0.48925	51.40609	0.95978	0.97824
#2	0.48404	0.96349	1.02016	20.27314	48.55684	0.48903	51.44667	0.96176	0.97961
<b>Mean</b>	<b>0.48374</b>	<b>0.96337</b>	<b>1.02068</b>	<b>20.26284</b>	<b>48.57151</b>	<b>0.48914</b>	<b>51.42638</b>	<b>0.96077</b>	<b>0.97892</b>
%RSD	0.08888	0.01776	0.07144	0.07186	0.04269	0.03252	0.05580	0.14565	0.09862

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	49.12733	0.98086	5.24859	0.98712	0.98226	5.21778	0.48302	1.00858	1.00687
#2	49.06662	0.98038	5.26999	0.98896	0.97215	5.22364	0.48726	1.00790	1.00078
<b>Mean</b>	<b>49.09697</b>	<b>0.98062</b>	<b>5.25929</b>	<b>0.98804</b>	<b>0.97720</b>	<b>5.22071</b>	<b>0.48514</b>	<b>1.00824</b>	<b>1.00383</b>
%RSD	0.08744	0.03442	0.28771	0.13161	0.73176	0.07941	0.61786	0.04755	0.42935

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.88059	1.06051	0.48607	0.34963	0.46748	0.51925	4.75476	0.47858	0.99600
#2	4.88577	1.05836	0.48652	0.35043	0.46897	0.52799	4.75822	0.48021	0.99834
<b>Mean</b>	<b>4.88318</b>	<b>1.05943</b>	<b>0.48630</b>	<b>0.35003</b>	<b>0.46823</b>	<b>0.52362</b>	<b>4.75649</b>	<b>0.47939</b>	<b>0.99717</b>
%RSD	0.07502	0.14373	0.06513	0.16172	0.22506	1.18000	0.05140	0.24079	0.16595

	Zr ppm	Pb calc	Se calc
#1	0.98609	0.98388	1.00744
#2	0.98743	0.97774	1.00315
<b>Mean</b>	<b>0.98676</b>	<b>0.98081</b>	<b>1.00529</b>
%RSD	0.09625	0.44214	0.30184

Method : Paragon File : 111010A  
SampleId1 : CCB SampleId2 :  
Analysis commenced : 10/10/2011 16:10:17  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:54  
[CB]

Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00016	0.04446	-0.00444	-0.00125	-0.00009	0.00039	-0.00322	0.04046	-0.00021
#2	-0.00074	0.04377	-0.00416	-0.00194	-0.00013	0.00038	-0.00306	0.04020	-0.00038
<b>Mean</b>	<b>-0.00045</b>	<b>0.04411</b>	<b>-0.00430</b>	<b>-0.00159</b>	<b>-0.00011</b>	<b>0.00039</b>	<b>-0.00314</b>	<b>0.04033</b>	<b>-0.00029</b>
%RSD	91.86013	1.10062	4.66764	30.57285	22.94870	1.35674	3.60160	0.45588	41.83833

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00053	-0.00057	-0.00187	0.03703	-0.04654	0.00389	0.00552	0.00053	0.00026
#2	-0.00077	-0.00089	-0.00194	0.03807	-0.04654	0.00388	0.00099	0.00038	-0.00144
<b>Mean</b>	<b>-0.00065</b>	<b>-0.00073</b>	<b>-0.00191</b>	<b>0.03755</b>	<b>-0.04654</b>	<b>0.00388</b>	<b>0.00325</b>	<b>0.00045</b>	<b>-0.00059</b>
%RSD	26.47568	30.99469	2.89153	1.95534	0.00000	0.15789	98.45561	24.25139	203.12158

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
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#1	-0.04906	-0.00140	-0.00545	-0.00002	0.00072	-0.02230	-0.00101	-0.00120	-0.00055
#2	-0.05031	-0.00116	-0.00222	-0.00245	0.00214	-0.01939	-0.00413	-0.00973	-0.00113
Mean	-0.04969	-0.00128	-0.00383	-0.00124	0.00143	-0.02084	-0.00257	-0.00547	-0.00084
%RSD	1.77425	13.16825	59.53055	139.17251	70.31405	9.88524	85.95353	110.26353	48.76047

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01539	-0.00372	-0.00262	-0.00343	-0.00158	0.00572	-0.01466	-0.00057	-0.00028
#2	-0.01731	0.00021	-0.00265	-0.00093	-0.00144	0.00299	-0.02447	-0.00057	0.00030
Mean	-0.01635	-0.00175	-0.00263	-0.00218	-0.00151	0.00435	-0.01957	-0.00057	0.00001
%RSD	8.30621	158.76858	0.77425	80.99909	6.59104	44.43909	35.45344	0.02482	3161.40379

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00171	0.00047	-0.00077
#2	0.00147	0.00061	-0.00400
Mean	0.00159	0.00054	-0.00238
%RSD	10.71352	17.90550	95.75893

Method : Paragon File : 111010A  
SampleId1 : 1109363-9 SampleId2 :  
Analysis commenced : 10/10/2011 16:13:05  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:54  
[SAMPLE]  
Position : TUBE71

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00061	38.72974	0.03112	0.01784	0.70646	0.00357	0.00248	35.52884	0.00060
#2	-0.00055	38.73480	0.03377	0.01805	0.70366	0.00353	-0.00093	35.65696	0.00089
Mean	-0.00058	38.73227	0.03245	0.01795	0.70506	0.00355	0.00077	35.59290	0.00074
%RSD	7.33623	0.00922	5.77240	0.81476	0.28059	0.82944	312.25490	0.25453	27.70678

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.02729	0.03526	0.05558	94.32704	11.25460	0.04106	17.85136	1.22390	0.00283
#2	0.02766	0.03516	0.05491	94.52870	11.21269	0.04092	17.85926	1.22517	0.00134
Mean	0.02747	0.03521	0.05525	94.42787	11.23365	0.04099	17.85531	1.22453	0.00209
%RSD	0.92917	0.19571	0.85625	0.15101	0.26381	0.22924	0.03127	0.07343	50.51289

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.15493	0.04973	2.44190	0.06275	0.07028	1.64009	0.00153	-0.01596	0.00808
#2	0.15368	0.05008	2.42271	0.06082	0.06845	1.63133	0.00086	-0.00356	0.00703
Mean	0.15431	0.04991	2.43230	0.06179	0.06937	1.63571	0.00120	-0.00976	0.00756
%RSD	0.57272	0.50541	0.55770	2.21416	1.85960	0.37859	40.17794	89.87720	9.80964

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	8.36237	0.00143	0.19902	0.05232	0.17983	-0.00134	0.02846	0.09716	0.21638

#2	8.37022	0.00608	0.19798	0.04284	0.17924	-0.00636	0.00871	0.09710	0.21784
Mean	8.36629	0.00376	0.19850	0.04758	0.17954	-0.00385	0.01859	0.09713	0.21711
%RSD	0.06627	87.46037	0.37168	14.09319	0.23456	92.34690	75.16413	0.04867	0.47393

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.02233	0.06777	0.00008
#2	0.02301	0.06591	0.00351
Mean	0.02267	0.06684	0.00179
%RSD	2.10265	1.96874	135.30952

Method : Paragon File : 111010A  
SampleId1 : 1109363-10 SampleId2 :  
Analysis commenced : 10/10/2011 16:14:56  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:54  
[SAMPLE]

Position : TUBE72

# Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00086	30.28393	0.03831	0.01998	0.59181	0.00362	-0.00318	75.39801	0.00068
#2	-0.00119	30.42817	0.03453	0.01950	0.59524	0.00361	-0.00172	75.34438	0.00107
Mean	-0.00103	30.35605	0.03642	0.01974	0.59352	0.00362	-0.00245	75.37120	0.00088
%RSD	23.02728	0.33598	7.34697	1.72850	0.40862	0.27261	42.02056	0.05032	31.11695

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.03140	0.02848	0.04968	97.32553	18.31999	0.04474	25.85860	1.31392	0.00209
#2	0.03140	0.02819	0.04960	97.38029	18.39596	0.04494	25.93163	1.31543	0.00277
Mean	0.03140	0.02834	0.04964	97.35291	18.35798	0.04484	25.89512	1.31467	0.00243
%RSD	0.00650	0.72172	0.10584	0.03978	0.29261	0.31888	0.19942	0.08132	19.75341

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.31015	0.04515	3.27846	0.06110	0.06480	3.10097	0.00049	-0.01048	0.00985
#2	0.31227	0.04714	3.26671	0.06262	0.06666	3.10390	-0.00095	-0.00568	0.01175
Mean	0.31121	0.04615	3.27259	0.06186	0.06573	3.10243	-0.00023	-0.00808	0.01080
%RSD	0.48149	3.05180	0.25398	1.74178	2.00200	0.06665	437.01748	42.00638	12.43831

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	10.75381	0.00284	0.31232	0.06797	0.19675	-0.00097	0.02700	0.08793	0.25160
#2	10.79656	-0.00073	0.31346	0.06259	0.19766	-0.00378	0.01254	0.08843	0.25160
Mean	10.77519	0.00106	0.31289	0.06528	0.19720	-0.00237	0.01977	0.08818	0.25160
%RSD	0.28048	239.40601	0.25844	5.83115	0.32626	83.63509	51.73529	0.40489	0.00000

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.02378	0.06356	0.00308
#2	0.02415	0.06531	0.00595

Mean 0.02397 0.06444 0.00451UNDGREEN  
%RSD 1.09402 1.91881 44.90083

Method : Paragon File : 111010A  
SampleId1 : 1109363-11 SampleId2 :  
Analysis commenced : 10/10/2011 16:16:47  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:55  
[SAMPLE]  
Position : TUBE73

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00074	22.05978	0.03283	0.01116	0.43101	0.00312	-0.00185	59.79210	0.00060
#2	-0.00079	22.00626	0.02980	0.01150	0.43044	0.00305	-0.00266	59.79069	0.00069
Mean	-0.00077	22.03302	0.03131	0.01133	0.43072	0.00309	-0.00226	59.79140	0.00065
%RSD	4.54272	0.17175	6.83612	2.15099	0.09266	1.41868	25.39783	0.00167	9.77077

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.02918	0.02174	0.04310	94.66939	9.17005	0.03264	19.49785	1.36662	0.00372
#2	0.02894	0.02211	0.04318	94.65234	9.13357	0.03255	19.47414	1.36710	0.00134
Mean	0.02906	0.02192	0.04314	94.66086	9.15181	0.03259	19.48600	1.36686	0.00253
%RSD	0.59122	1.21680	0.13872	0.01274	0.28190	0.20055	0.08604	0.02472	66.35632

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	0.19965	0.03950	3.16777	0.05572	0.05961	2.72090	-0.00121	-0.01791	0.00859
#2	0.19854	0.03739	3.13347	0.05254	0.05713	2.71798	-0.00046	-0.01768	0.00619
Mean	0.19910	0.03845	3.15062	0.05413	0.05837	2.71944	-0.00083	-0.01779	0.00739
%RSD	0.39288	3.88147	0.76979	4.15418	3.00274	0.07600	64.07459	0.90233	22.97959

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	2.39102	0.00184	0.22668	0.05296	0.13743	0.00347	0.02015	0.08522	0.24141
#2	2.39004	0.00148	0.22629	0.05500	0.13729	-0.00419	0.02132	0.08455	0.24345
Mean	2.39053	0.00166	0.22648	0.05398	0.13736	-0.00036	0.02074	0.08489	0.24243
%RSD	0.02896	15.20225	0.12376	2.67189	0.07238	1507.40679	3.97514	0.56156	0.59430

	Zr ppm	Pb calc	Se calc
#1	0.02003	0.05831	-0.00024
#2	0.01989	0.05560	-0.00176
Mean	0.01996	0.05696	-0.00100
%RSD	0.50213	3.36711	108.05780

Method : Paragon File : 111010A  
SampleId1 : 1109363-12 SampleId2 :  
Analysis commenced : 10/10/2011 16:18:38  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:55  
[SAMPLE]  
Position : TUBE74

Final concentrations38:22 User: MIKE LUNDGREEN

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00144	83.85256	0.15049	0.03294	1.10020	0.01023	0.00692	173.50954	0.00201
#2	-0.00242	83.52532	0.14158	0.03177	1.10052	0.01021	0.01275	173.37225	0.00205
Mean	-0.00193	83.68894	0.14603	0.03235	1.10036	0.01022	0.00984	173.44089	0.00203
%RSD	35.71581	0.27650	4.31094	2.56120	0.02060	0.19071	41.95325	0.05597	1.52523
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.07748	0.07941	0.37852	225.03358	25.24409	0.12484	42.70914	2.16947	0.17545
#2	0.07705	0.07833	0.37681	225.28733	25.14559	0.12458	42.67800	2.17309	0.17715
Mean	0.07726	0.07887	0.37766	225.16046	25.19484	0.12471	42.69357	2.17128	0.17630
%RSD	0.38785	0.96623	0.31992	0.07969	0.27645	0.14901	0.05158	0.11809	0.68077
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	1.34089	0.11228	4.85721	0.26647	0.25799	6.89909	0.00699	0.07377	0.10766
#2	1.33645	0.11141	4.83942	0.26373	0.26464	6.94902	0.00190	0.06622	0.11128
Mean	1.33867	0.11185	4.84832	0.26510	0.26132	6.92406	0.00445	0.07000	0.10947
%RSD	0.23438	0.54513	0.25948	0.73013	1.80016	0.50992	80.95820	7.62552	2.33454
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	7.13445	0.01175	1.14711	0.15277	0.21900	0.01151	0.35788	0.92620	0.59402
#2	7.12992	0.00818	1.14399	0.15831	0.21890	0.00496	0.35366	0.92689	0.59577
Mean	7.13219	0.00997	1.14555	0.15554	0.21895	0.00824	0.35577	0.92655	0.59490
%RSD	0.04498	25.35873	0.19266	2.52158	0.03206	56.17442	0.83737	0.05251	0.20807
	Zr ppm	Pb calc	Se calc						
#1	0.06388	0.26081	0.09638						
#2	0.06330	0.26434	0.09627						
Mean	0.06359	0.26258	0.09632						
%RSD	0.65140	0.94948	0.07564						

Method : Paragon File : 111010A  
SampleId1 : IP111007-5MB SampleId2 :  
Analysis commenced : 10/10/2011 16:20:56  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:55

[SAMPLE]

Position : TUBE75

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00054	0.00045	-0.00189	-0.00366	-0.00097	-0.00001	-0.00176	-0.01726	-0.00016
#2	-0.00020	0.00632	0.00133	-0.00408	-0.00097	-0.00003	-0.00290	-0.01752	-0.00033
Mean	-0.00037	0.00338	-0.00028	-0.00387	-0.00097	-0.00002	-0.00233	-0.01739	-0.00024
%RSD	65.44644	122.76009	816.03630	7.55874	0.00000	48.33417	34.47948	1.05714	51.22006



ted: 10/11/2011 11:38:22 User: MIKE LUNDGREEN

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00174	-0.00062	-0.00246	0.02395	-0.08606	0.00364	-0.03772	-0.00033	-0.00205
#2	-0.00162	-0.00092	-0.00246	0.02146	-0.08719	0.00365	-0.03772	-0.00033	-0.00205
<b>Mean</b>	<b>-0.00168</b>	<b>-0.00077</b>	<b>-0.00246</b>	<b>0.02270</b>	<b>-0.08663</b>	<b>0.00364</b>	<b>-0.03772</b>	<b>-0.00033</b>	<b>-0.00205</b>
%RSD	5.08824	27.42792	0.02580	7.76101	0.92168	0.11214	0.00000	0.00000	0.00000

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.07466	0.00033	-0.00453	-0.00171	0.00086	-0.04269	-0.00069	0.00047	0.00250
#2	-0.07481	0.00051	0.00032	-0.00194	0.00111	-0.03104	-0.00303	-0.00569	-0.00215
<b>Mean</b>	<b>-0.07474</b>	<b>0.00042</b>	<b>-0.00211</b>	<b>-0.00182</b>	<b>0.00098</b>	<b>-0.03687</b>	<b>-0.00186</b>	<b>-0.00261</b>	<b>0.00017</b>
%RSD	0.13606	30.21431	162.65845	9.09227	17.75348	22.35322	88.67243	167.06718	1913.65328

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01903	-0.00086	-0.00320	-0.00062	-0.00243	0.00016	-0.02100	-0.00079	0.00088
#2	-0.02010	-0.00086	-0.00319	-0.00034	-0.00221	-0.00102	-0.01984	-0.00061	-0.00057
<b>Mean</b>	<b>-0.01956</b>	<b>-0.00086</b>	<b>-0.00320</b>	<b>-0.00048</b>	<b>-0.00232</b>	<b>-0.00043</b>	<b>-0.02042</b>	<b>-0.00070</b>	<b>0.00016</b>
%RSD	3.87834	0.02064	0.21235	41.44350	6.54538	193.63114	4.00186	17.78267	649.03324

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00086	0.00001	0.00182
#2	0.00086	0.00009	-0.00333
<b>Mean</b>	<b>0.00086</b>	<b>0.00005</b>	<b>-0.00075</b>
%RSD	0.44184	125.83290	483.37274

Method : Paragon File : 111010A  
SampleId1 : IP111007-5RVS SampleId2 :  
Analysis commenced : 10/10/2011 16:22:48  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:55

[SAMPLE]

Position : TUBE76

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00826	0.98914	0.04285	0.04176	0.04715	0.00960	0.09207	4.85862	0.01856
#2	0.00801	0.98013	0.04768	0.04218	0.04719	0.00956	0.09434	4.86753	0.01876
<b>Mean</b>	<b>0.00813</b>	<b>0.98463</b>	<b>0.04527</b>	<b>0.04197</b>	<b>0.04717</b>	<b>0.00958</b>	<b>0.09321</b>	<b>4.86308</b>	<b>0.01866</b>
%RSD	2.20380	0.64731	7.53754	0.69686	0.05259	0.26297	1.72469	0.12949	0.78555

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.01744	0.04842	0.04832	1.03433	7.42521	0.03959	4.75881	0.04752	0.09434
#2	0.01750	0.04806	0.04806	1.03287	7.39547	0.03943	4.75261	0.04736	0.09427
<b>Mean</b>	<b>0.01747</b>	<b>0.04824</b>	<b>0.04819</b>	<b>1.03360</b>	<b>7.41034</b>	<b>0.03951</b>	<b>4.75571</b>	<b>0.04744</b>	<b>0.09431</b>
%RSD	0.24465	0.51940	0.38381	0.10025	0.28380	0.28954	0.09207	0.23275	0.05088

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	7.76492	0.04794	0.94271	0.04430	0.05085	0.90183	0.09139	0.02742	0.04390
#2	7.71514	0.04762	0.92555	0.04343	0.05081	0.91058	0.08739	0.04020	0.04426
<b>Mean</b>	<b>7.74003</b>	<b>0.04778</b>	<b>0.93413</b>	<b>0.04387</b>	<b>0.05083</b>	<b>0.90620</b>	<b>0.08939</b>	<b>0.03381</b>	<b>0.04408</b>
%RSD	0.45474	0.48390	1.29900	1.40632	0.05814	0.68279	3.16563	26.73892	0.58238

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	0.24187	0.09203	0.04481	-0.00134	0.04473	0.09514	0.45845	0.04798	0.04797
#2	0.24133	0.10526	0.04463	-0.00202	0.04483	0.08923	0.46480	0.04784	0.04768
<b>Mean</b>	<b>0.24160</b>	<b>0.09865</b>	<b>0.04472</b>	<b>-0.00168</b>	<b>0.04478</b>	<b>0.09219</b>	<b>0.46163</b>	<b>0.04791</b>	<b>0.04783</b>
%RSD	0.15971	9.48243	0.27380	28.80466	0.15665	4.53495	0.97266	0.20885	0.42980

	Zr ppm	Pb calc	Se calc
#1	0.04786	0.04867	0.03841
#2	0.04883	0.04835	0.04291
<b>Mean</b>	<b>0.04835</b>	<b>0.04851</b>	<b>0.04066</b>
%RSD	1.42319	0.46408	7.82500

Method : Paragon File : 111010A  
SampleId1 : IP111007-5LCS SampleId2 :  
Analysis commenced : 10/10/2011 16:28:57  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:55  
[SAMPLE]

Position : TUBE77

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.08772	1.98628	1.79193	0.43830	1.86809	0.04602	-0.00140	37.78301	0.04569
#2	0.08725	1.98247	1.80253	0.43692	1.86463	0.04591	-0.00757	37.76434	0.04570
<b>Mean</b>	<b>0.08749</b>	<b>1.98438</b>	<b>1.79723</b>	<b>0.43761</b>	<b>1.86636</b>	<b>0.04596</b>	<b>-0.00448</b>	<b>37.77367</b>	<b>0.04569</b>
%RSD	0.38355	0.13576	0.41710	0.22311	0.13091	0.17460	97.32594	0.03495	0.02057

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.45288	0.18431	0.24478	0.95052	33.66045	0.42539	37.06139	0.45405	0.93067
#2	0.45129	0.18234	0.24411	0.95072	33.66475	0.42550	37.01732	0.45421	0.92978
<b>Mean</b>	<b>0.45209</b>	<b>0.18333</b>	<b>0.24444</b>	<b>0.95062</b>	<b>33.66260</b>	<b>0.42545</b>	<b>37.03936</b>	<b>0.45413</b>	<b>0.93023</b>
%RSD	0.24828	0.75698	0.19414	0.01556	0.00903	0.01774	0.08413	0.02446	0.06744

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	33.04524	0.46366	0.00147	0.46301	0.44402	-0.00482	0.44304	1.67754	1.62187
#2	33.09581	0.46337	0.00170	0.45561	0.45331	-0.01064	0.44271	1.67343	1.63852
<b>Mean</b>	<b>33.07053</b>	<b>0.46352</b>	<b>0.00158</b>	<b>0.45931</b>	<b>0.44866</b>	<b>-0.00773</b>	<b>0.44287</b>	<b>1.67549</b>	<b>1.63020</b>
%RSD	0.10813	0.04542	10.29139	1.13823	1.46321	53.30463	0.05127	0.17338	0.72224

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.71368	0.49333	0.46520	-0.02820	0.44260	1.93183	-0.01413	0.46521	0.45754
#2	1.71231	0.48868	0.46428	-0.02715	0.44349	1.92983	-0.03144	0.46379	0.45929
<b>Mean</b>	<b>1.71299</b>	<b>0.49101</b>	<b>0.46474</b>	<b>-0.02767</b>	<b>0.44305</b>	<b>1.93083</b>	<b>-0.02278</b>	<b>0.46450</b>	<b>0.45842</b>
%RSD	0.05674	0.67035	0.13918	2.68198	0.14138	0.07331	53.72397	0.21554	0.26977

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.00565	0.45034	1.64041
#2	0.00451	0.45407	1.65015
<b>Mean</b>	<b>0.00508</b>	<b>0.45221</b>	<b>1.64528</b>
%RSD	15.97136	0.58333	0.41852

Method : Paragon File : 111010A  
**SampleId1 : 1109362-1** **SampleId2 :**  
**Analysis commenced : 10/10/2011 16:30:48**  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:55

[SAMPLE]

Position : TUBE78

Final concentrations

	<b>Ag</b> ppm	<b>Al</b> ppm	<b>As</b> ppm	<b>B</b> ppm	<b>Ba</b> ppm	<b>Be</b> ppm	<b>Bi</b> ppm	<b>Ca</b> ppm	<b>Cd</b> ppm
#1	-0.00125	39.28571	0.10598	0.01757	0.47600	0.00493	0.00013	124.94297	0.00036
#2	-0.00141	39.69822	0.10607	0.01702	0.48076	0.00492	-0.00197	125.04993	0.00086
<b>Mean</b>	<b>-0.00133</b>	<b>39.49197</b>	<b>0.10603</b>	<b>0.01729</b>	<b>0.47838</b>	<b>0.00492</b>	<b>-0.00092</b>	<b>124.99645</b>	<b>0.00061</b>
%RSD	8.68684	0.73861	0.06314	2.25495	0.70442	0.13991	161.84612	0.06051	57.90382

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	0.02637	0.02694	0.05503	106.64358	10.69044	0.04878	17.09760	1.77127	0.51102
#2	0.02577	0.02671	0.05501	106.86131	10.78248	0.04920	17.20686	1.77592	0.51912
<b>Mean</b>	<b>0.02607</b>	<b>0.02683</b>	<b>0.05502</b>	<b>106.75245</b>	<b>10.73646</b>	<b>0.04899</b>	<b>17.15223</b>	<b>1.77360</b>	<b>0.51507</b>
%RSD	1.63039	0.59583	0.01891	0.14422	0.60614	0.61707	0.45045	0.18526	1.11172

	<b>Na</b> ppm	<b>Ni</b> ppm	<b>P</b> ppm	<b>Pb I</b> ppm	<b>Pb II</b> ppm	<b>S</b> ppm	<b>Sb</b> ppm	<b>Se I</b> ppm	<b>Se II</b> ppm
#1	0.27447	0.03953	2.69031	0.16060	0.16652	25.82691	-0.00085	0.18316	0.20454
#2	0.27693	0.04131	2.70788	0.15852	0.16480	25.85391	0.00300	0.19247	0.20269
<b>Mean</b>	<b>0.27570</b>	<b>0.04042</b>	<b>2.69910</b>	<b>0.15956</b>	<b>0.16566</b>	<b>25.84041</b>	<b>0.00108</b>	<b>0.18781</b>	<b>0.20362</b>
%RSD	0.62970	3.11974	0.46039	0.92107	0.73131	0.07389	253.16855	3.50442	0.64216

	<b>Si</b> ppm	<b>Sn</b> ppm	<b>Sr</b> ppm	<b>Th</b> ppm	<b>Ti</b> ppm	<b>Tl</b> ppm	<b>U</b> ppm	<b>V</b> ppm	<b>Zn</b> ppm
#1	13.33256	0.00283	0.38470	0.06926	0.20584	-0.00002	4.48475	1.03553	0.21289
#2	13.43433	0.00462	0.38768	0.05930	0.20662	-0.00356	4.50369	1.03771	0.21172
<b>Mean</b>	<b>13.38344</b>	<b>0.00373</b>	<b>0.38619</b>	<b>0.06428</b>	<b>0.20623</b>	<b>-0.00179</b>	<b>4.49422</b>	<b>1.03662</b>	<b>0.21231</b>
%RSD	0.53766	33.89675	0.54585	10.95856	0.26661	140.10005	0.29806	0.14828	0.38770

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
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#1	0.04133	0.16455	0.19742	UNDGREEN
#2	0.04202	0.16271	0.19929	
<b>Mean</b>	<b>0.04168</b>	<b>0.16363</b>	<b>0.19835</b>	
%RSD	1.16609	0.79293	0.66527	

Method : Paragon File : 111010A  
SampleId1 : 1109362-1D SampleId2 :  
Analysis commenced : 10/10/2011 16:32:40  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:56  
[SAMPLE]

Position : TUBE79

Final concentrations

	<b>Ag</b> ppm	<b>Al</b> ppm	<b>As</b> ppm	<b>B</b> ppm	<b>Ba</b> ppm	<b>Be</b> ppm	<b>Bi</b> ppm	<b>Ca</b> ppm	<b>Cd</b> ppm
#1	-0.00088	37.32207	0.10664	0.01495	0.38128	0.00466	-0.00242	124.55956	0.00083
#2	-0.00093	37.13108	0.10551	0.01502	0.38097	0.00461	-0.00096	124.08349	0.00100
<b>Mean</b>	<b>-0.00091</b>	<b>37.22657</b>	<b>0.10607</b>	<b>0.01498</b>	<b>0.38112</b>	<b>0.00464</b>	<b>-0.00169</b>	<b>124.32152</b>	<b>0.00092</b>
%RSD	3.87416	0.36277	0.75733	0.32531	0.05886	0.79357	61.17676	0.27077	12.53008

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	0.02603	0.02590	0.05461	103.32411	10.24198	0.04705	16.62986	1.77271	0.51613
#2	0.02591	0.02652	0.05487	102.94588	10.18612	0.04682	16.58584	1.76719	0.51273
<b>Mean</b>	<b>0.02597</b>	<b>0.02621</b>	<b>0.05474</b>	<b>103.13499</b>	<b>10.21405</b>	<b>0.04693</b>	<b>16.60785</b>	<b>1.76995</b>	<b>0.51443</b>
%RSD	0.32703	1.67607	0.33238	0.25932	0.38672	0.34383	0.18745	0.22084	0.46769

	<b>Na</b> ppm	<b>Ni</b> ppm	<b>P</b> ppm	<b>Pb I</b> ppm	<b>Pb II</b> ppm	<b>S</b> ppm	<b>Sb</b> ppm	<b>Se I</b> ppm	<b>Se II</b> ppm
#1	0.25729	0.03926	2.57905	0.15023	0.15350	24.59169	0.00287	0.21073	0.23147
#2	0.25464	0.03926	2.60223	0.15201	0.15406	24.57072	0.00295	0.21257	0.22651
<b>Mean</b>	<b>0.25597</b>	<b>0.03926</b>	<b>2.59064</b>	<b>0.15112</b>	<b>0.15378</b>	<b>24.58120</b>	<b>0.00291</b>	<b>0.21165</b>	<b>0.22899</b>
%RSD	0.73127	0.00000	0.63275	0.83047	0.25593	0.06033	1.84322	0.61488	1.53038

	<b>Si</b> ppm	<b>Sn</b> ppm	<b>Sr</b> ppm	<b>Th</b> ppm	<b>Ti</b> ppm	<b>Tl</b> ppm	<b>U</b> ppm	<b>V</b> ppm	<b>Zn</b> ppm
#1	3.01747	0.00217	0.37495	0.06815	0.16298	-0.00051	4.35510	0.92402	0.20008
#2	3.00142	0.00610	0.37460	0.06361	0.16222	0.00689	4.35420	0.91961	0.20154
<b>Mean</b>	<b>3.00945</b>	<b>0.00413</b>	<b>0.37477</b>	<b>0.06588</b>	<b>0.16260</b>	<b>0.00319</b>	<b>4.35465</b>	<b>0.92182</b>	<b>0.20081</b>
%RSD	0.37708	67.25946	0.06594	4.87722	0.32731	163.82216	0.01461	0.33784	0.51233

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.04682	0.15241	0.22456
#2	0.04714	0.15337	0.22187
<b>Mean</b>	<b>0.04698</b>	<b>0.15289</b>	<b>0.22322</b>
%RSD	0.49395	0.44504	0.85304

Method : Paragon File : 111010A  
SampleId1 : 1109362-1L 5X SampleId2 :  
Analysis commenced : 10/10/2011 16:34:31

Printed : 10/11/2011 11:37:56  
[SAMPLE]

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : TUBE80

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00033	8.16304	0.02620	0.00144	0.09780	0.00117	0.00299	26.30376	0.00025
#2	-0.00077	8.11276	0.02318	0.00082	0.09695	0.00109	-0.00270	25.78211	-0.00016
<b>Mean</b>	<b>-0.00022</b>	<b>8.13790</b>	<b>0.02469</b>	<b>0.00113</b>	<b>0.09737</b>	<b>0.00113</b>	<b>0.00014</b>	<b>26.04293</b>	<b>0.00005</b>
%RSD	354.25355	0.43688	8.66887	38.87231	0.61189	5.00061	2813.39486	1.41634	593.14531

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.00636	0.00713	0.01006	20.92136	1.79278	0.01140	3.67303	0.38339	0.11076
#2	0.00443	0.00462	0.00855	20.58223	1.75834	0.01133	3.60744	0.37719	0.10642
<b>Mean</b>	<b>0.00539</b>	<b>0.00587</b>	<b>0.00930</b>	<b>20.75180</b>	<b>1.77556</b>	<b>0.01136</b>	<b>3.64024</b>	<b>0.38029</b>	<b>0.10859</b>
%RSD	25.41532	30.27141	11.45578	1.15557	1.37149	0.43148	1.27421	1.15268	2.82807

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.00220	0.00954	0.58687	0.04149	0.03027	5.62241	0.00363	0.04699	0.03876
#2	-0.00450	0.00728	0.59243	0.02942	0.03903	5.63121	-0.00528	0.03690	0.05062
<b>Mean</b>	<b>-0.00335</b>	<b>0.00841</b>	<b>0.58965</b>	<b>0.03546</b>	<b>0.03465</b>	<b>5.62681</b>	<b>-0.00082</b>	<b>0.04195</b>	<b>0.04469</b>
%RSD	48.56839	18.98694	0.66606	24.08411	17.87614	0.11057	765.58841	16.99970	18.75461

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	2.87473	0.00267	0.07738	0.02390	0.04307	0.00700	0.93384	0.22095	0.04855
#2	2.83669	-0.00555	0.07641	0.02004	0.04236	-0.00536	0.89193	0.21605	0.04623
<b>Mean</b>	<b>2.85571</b>	<b>-0.00144</b>	<b>0.07689</b>	<b>0.02197</b>	<b>0.04272</b>	<b>0.00082</b>	<b>0.91289</b>	<b>0.21850</b>	<b>0.04739</b>
%RSD	0.94204	402.24942	0.89434	12.42616	1.17697	1064.05595	3.24660	1.58815	3.47006

	Zr ppm	Pb calc	Se calc
#1	0.00920	0.03401	0.04150
#2	0.00825	0.03583	0.04605
<b>Mean</b>	<b>0.00872</b>	<b>0.03492</b>	<b>0.04378</b>
%RSD	7.64259	3.68779	7.34590

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:56

SampleId1 : CCV

SampleId2 :

[CV]

Analysis commenced : 10/10/2011 16:37:22

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19175	51.93270	0.49105	0.97588	0.95718	0.47367	0.51250	50.58318	0.49569
#2	0.19308	51.80912	0.49742	0.98370	0.95630	0.47323	0.51461	50.54239	0.49735

<b>Mean</b>	<b>0.19241</b>	<b>51.87091</b>	<b>0.49423</b>	<b>0.97979</b>	<b>0.95674</b>	<b>0.47345</b>	<b>0.51356</b>	<b>50.56278</b>	<b>0.49652</b>
%RSD	0.48855	0.16846	0.91129	0.56415	0.06567	0.06508	0.29040	0.05704	0.23600
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.47534	0.94794	1.00916	19.83250	48.29518	0.48414	50.74424	0.94434	0.95633
#2	0.47515	0.94767	1.00830	19.82342	48.17110	0.48275	50.78945	0.94347	0.96043
<b>Mean</b>	<b>0.47524</b>	<b>0.94781</b>	<b>1.00873</b>	<b>19.82796</b>	<b>48.23314</b>	<b>0.48345</b>	<b>50.76684</b>	<b>0.94391</b>	<b>0.95838</b>
%RSD	0.02730	0.02026	0.06014	0.03236	0.18190	0.20333	0.06298	0.06522	0.30216
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	48.78699	0.95768	5.14568	0.96607	0.98612	5.10640	0.47108	0.99151	1.00135
#2	48.63042	0.96102	5.19154	0.97366	0.96483	5.15622	0.47568	0.97953	0.99503
<b>Mean</b>	<b>48.70871</b>	<b>0.95935</b>	<b>5.16861</b>	<b>0.96987</b>	<b>0.97548</b>	<b>5.13131</b>	<b>0.47338</b>	<b>0.98552</b>	<b>0.99819</b>
%RSD	0.22729	0.24627	0.62748	0.55334	1.54315	0.68665	0.68733	0.85965	0.44778
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.80719	1.03792	0.47800	0.34513	0.46230	0.51350	4.69660	0.47251	0.97669
#2	4.80321	1.03936	0.47726	0.34579	0.46222	0.51167	4.69777	0.47386	0.97582
<b>Mean</b>	<b>4.80520</b>	<b>1.03864</b>	<b>0.47763</b>	<b>0.34546</b>	<b>0.46226</b>	<b>0.51259</b>	<b>4.69719</b>	<b>0.47318</b>	<b>0.97626</b>
%RSD	0.05855	0.09766	0.10953	0.13508	0.01266	0.25141	0.01751	0.20076	0.06355
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.97211	0.97945	0.99807						
#2	0.97160	0.96777	0.98987						
<b>Mean</b>	<b>0.97186</b>	<b>0.97361</b>	<b>0.99397</b>						
%RSD	0.03742	0.84770	0.58377						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:56

SampleId1 : CCB

SampleId2 :

[CB]

Analysis commenced : 10/10/2011 16:39:18

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD2

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00020	0.03638	-0.00056	-0.00277	-0.00051	0.00034	-0.00630	0.00952	-0.00051
#2	-0.00030	0.03869	-0.00104	-0.00215	-0.00030	0.00035	-0.00630	0.02122	-0.00006
<b>Mean</b>	<b>-0.00025</b>	<b>0.03754</b>	<b>-0.00080</b>	<b>-0.00246</b>	<b>-0.00041</b>	<b>0.00034</b>	<b>-0.00630</b>	<b>0.01537</b>	<b>-0.00028</b>
%RSD	29.36735	4.34717	41.85885	17.86191	36.63361	2.08718	0.05060	53.82980	112.30671
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00077	-0.00038	-0.00238	0.01274	-0.04112	0.00383	-0.01301	-0.00001	-0.00151
#2	-0.00004	-0.00025	-0.00170	0.01845	-0.01786	0.00390	-0.00189	0.00022	-0.00069
<b>Mean</b>	<b>-0.00041</b>	<b>-0.00031</b>	<b>-0.00204</b>	<b>0.01559</b>	<b>-0.02949</b>	<b>0.00387</b>	<b>-0.00745</b>	<b>0.00010</b>	<b>-0.00110</b>

%RSD	126.49313	29.74023	23.54046	25.89698	55.77929	1.26829	105.48102	159.31884	52.36835
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.05568	-0.00134	-0.00499	-0.00330	0.00054	-0.01356	-0.00358	-0.00199	-0.00230
#2	-0.05223	-0.00074	0.00262	0.00035	0.00019	-0.01647	0.00043	0.00306	-0.00106
<b>Mean</b>	<b>-0.05395</b>	<b>-0.00104</b>	<b>-0.00118</b>	<b>-0.00148</b>	<b>0.00036</b>	<b>-0.01501</b>	<b>-0.00158</b>	<b>0.00053</b>	<b>-0.00168</b>
%RSD	4.52446	40.45438	454.95778	174.89073	69.69128	13.72194	179.58998	668.28230	51.95513
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.02170	-0.00300	-0.00285	-0.00043	-0.00166	0.00316	-0.01984	-0.00040	-0.00144
#2	-0.02075	0.00307	-0.00274	-0.00133	-0.00136	-0.00038	-0.01176	-0.00012	-0.00057
<b>Mean</b>	<b>-0.02123</b>	<b>0.00004</b>	<b>-0.00280</b>	<b>-0.00088</b>	<b>-0.00151</b>	<b>0.00139</b>	<b>-0.01580</b>	<b>-0.00026</b>	<b>-0.00100</b>
%RSD	3.18059	11878.73285	2.67306	71.67047	13.91934	180.50193	36.13538	77.09247	61.39365
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00118	-0.00074	-0.00220						
#2	0.00147	0.00024	0.00031						
<b>Mean</b>	<b>0.00133</b>	<b>-0.00025</b>	<b>-0.00094</b>						
%RSD	15.43322	277.81405	187.65583						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:56

SampleId1 : 1109362-1MS

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 16:41:15

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE81

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.08676	57.20825	1.85112	0.38811	2.21096	0.04939	0.00050	171.55836	0.04593
#2	0.08589	57.24437	1.86144	0.38777	2.21961	0.04948	0.00343	171.25994	0.04516
<b>Mean</b>	<b>0.08633</b>	<b>57.22631</b>	<b>1.85628</b>	<b>0.38794</b>	<b>2.21528</b>	<b>0.04943</b>	<b>0.00196</b>	<b>171.40915</b>	<b>0.04555</b>
%RSD	0.71646	0.04462	0.39306	0.06291	0.27588	0.13054	105.15841	0.12310	1.20359
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.45934	0.20944	0.30201	116.29200	49.21672	0.52001	55.77019	2.31950	1.41503
#2	0.45959	0.20922	0.30158	116.31161	49.31897	0.52111	55.81001	2.32080	1.41839
<b>Mean</b>	<b>0.45946</b>	<b>0.20933</b>	<b>0.30180</b>	<b>116.30181</b>	<b>49.26784</b>	<b>0.52056</b>	<b>55.79010</b>	<b>2.32015</b>	<b>1.41671</b>
%RSD	0.03869	0.07196	0.09921	0.01192	0.14676	0.14964	0.05047	0.03938	0.16745
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	36.59967	0.47620	2.78640	0.60556	0.59083	28.03469	0.36464	1.83533	1.83227
#2	36.60496	0.47519	2.76835	0.59966	0.59887	28.01665	0.37090	1.83726	1.83562
<b>Mean</b>	<b>36.60231</b>	<b>0.47569</b>	<b>2.77737</b>	<b>0.60261</b>	<b>0.59485</b>	<b>28.02567</b>	<b>0.36777</b>	<b>1.83629</b>	<b>1.83394</b>
%RSD	0.01022	0.15049	0.45955	0.69215	0.95666	0.04553	1.20419	0.07429	0.12881

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	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	5.45840	0.47538	0.85425	0.04958	0.49136	1.84856	4.42553	1.63371	0.67019
#2	5.45788	0.47860	0.85679	0.05508	0.49320	1.85446	4.41973	1.63214	0.66610
Mean	<b>5.45814</b>	<b>0.47699</b>	<b>0.85552</b>	<b>0.05233</b>	<b>0.49228</b>	<b>1.85151</b>	<b>4.42263</b>	<b>1.63292</b>	<b>0.66814</b>
%RSD	0.00673	0.47728	0.21050	7.43303	0.26404	0.22522	0.09271	0.06778	0.43248

	Zr ppm	Pb calc	Se calc
#1	0.06119	0.59573	1.83329
#2	0.05984	0.59913	1.83616
Mean	<b>0.06051</b>	<b>0.59743</b>	<b>1.83473</b>
%RSD	1.57784	0.40285	0.11064

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:56

SampleId1 : 1109362-1MSD

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 16:43:06

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE82

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.08824	55.47626	1.90707	0.40647	2.28868	0.05112	-0.00481	164.08148	0.04668
#2	0.08917	55.45916	1.91498	0.41186	2.29114	0.05119	0.00153	164.41088	0.04733
Mean	<b>0.08870</b>	<b>55.46771</b>	<b>1.91102</b>	<b>0.40917</b>	<b>2.28991</b>	<b>0.05116</b>	<b>-0.00164</b>	<b>164.24618</b>	<b>0.04701</b>
%RSD	0.73873	0.02181	0.29276	0.93051	0.07601	0.09063	272.81336	0.14181	0.97829

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.47399	0.21469	0.30848	103.83152	50.07340	0.53739	56.06971	2.23396	1.42613
#2	0.47557	0.21349	0.30993	104.03464	50.06703	0.53668	56.08877	2.23888	1.43195
Mean	<b>0.47478</b>	<b>0.21409</b>	<b>0.30920</b>	<b>103.93308</b>	<b>50.07021</b>	<b>0.53704</b>	<b>56.07924</b>	<b>2.23642</b>	<b>1.42904</b>
%RSD	0.23565	0.39491	0.33039	0.13819	0.00899	0.09264	0.02404	0.15556	0.28799

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	37.82867	0.49433	2.58537	0.60572	0.59868	22.82573	0.37814	1.84949	1.83413
#2	37.78137	0.49264	2.59685	0.60719	0.60359	22.83470	0.38210	1.86246	1.83150
Mean	<b>37.80502</b>	<b>0.49348</b>	<b>2.59111</b>	<b>0.60645</b>	<b>0.60114</b>	<b>22.83022</b>	<b>0.38012</b>	<b>1.85598</b>	<b>1.83281</b>
%RSD	0.08848	0.24321	0.31312	0.17114	0.57731	0.02778	0.73610	0.49426	0.10141

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	7.03855	0.49289	0.85202	0.03887	0.51331	1.92396	4.35418	1.63336	0.65559
#2	7.04007	0.49826	0.85335	0.04404	0.51429	1.91708	4.36735	1.63351	0.65763
Mean	<b>7.03931</b>	<b>0.49558</b>	<b>0.85269</b>	<b>0.04146</b>	<b>0.51380</b>	<b>1.92052</b>	<b>4.36076</b>	<b>1.63343</b>	<b>0.65661</b>
%RSD	0.01526	0.76603	0.11008	8.81678	0.13448	0.25344	0.21351	0.00634	0.22002



	<b>Zr</b>	<b>Pb</b>	<b>SeUNDGREEN</b>
	ppm	calc	calc
#1	0.06015	0.60103	1.83924
#2	0.05944	0.60479	1.84181
<b>Mean</b>	<b>0.05979</b>	<b>0.60291</b>	<b>1.84053</b>
%RSD	0.84423	0.44126	0.09861

Method : Paragon File : 111010A  
SampleId1 : 1109362-2 SampleId2 :  
Analysis commenced : 10/10/2011 16:44:58  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:57

[SAMPLE]

Position : TUBE83

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00149	35.94951	0.09547	0.01653	0.38054	0.00470	-0.00232	130.32015	0.00071
#2	-0.00077	36.10033	0.09613	0.01529	0.38174	0.00472	-0.00216	130.52858	0.00075
<b>Mean</b>	<b>-0.00113</b>	<b>36.02492</b>	<b>0.09580</b>	<b>0.01591</b>	<b>0.38114</b>	<b>0.00471</b>	<b>-0.00224</b>	<b>130.42436</b>	<b>0.00073</b>
%RSD	45.20377	0.29604	0.48909	5.51315	0.22236	0.30990	5.19264	0.11300	4.55672

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.02505	0.02523	0.05089	91.99497	9.88806	0.04561	15.70013	1.81118	0.48803
#2	0.02542	0.02569	0.05165	92.15816	9.90965	0.04574	15.74538	1.81567	0.48871
<b>Mean</b>	<b>0.02524</b>	<b>0.02546</b>	<b>0.05127</b>	<b>92.07657</b>	<b>9.89885</b>	<b>0.04567</b>	<b>15.72275</b>	<b>1.81343</b>	<b>0.48837</b>
%RSD	1.03420	1.25498	1.04771	0.12532	0.15428	0.21020	0.20351	0.17504	0.09851

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.25382	0.03721	2.48355	0.14824	0.15166	19.35180	0.00186	0.15984	0.17682
#2	0.25455	0.03796	2.47723	0.14910	0.14861	19.38457	0.00442	0.16724	0.17853
<b>Mean</b>	<b>0.25419</b>	<b>0.03758</b>	<b>2.48039</b>	<b>0.14867</b>	<b>0.15013</b>	<b>19.36819</b>	<b>0.00314</b>	<b>0.16354</b>	<b>0.17767</b>
%RSD	0.20083	1.39805	0.18012	0.40920	1.43284	0.11963	57.56663	3.19939	0.67933

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.29847	0.00145	0.36657	0.06867	0.16359	0.00109	4.74931	0.94451	0.19106
#2	4.31226	0.00217	0.36749	0.06293	0.16180	0.00244	4.76250	0.94330	0.19048
<b>Mean</b>	<b>4.30536</b>	<b>0.00181</b>	<b>0.36703</b>	<b>0.06580</b>	<b>0.16270</b>	<b>0.00177</b>	<b>4.75591</b>	<b>0.94390</b>	<b>0.19077</b>
%RSD	0.22648	27.99283	0.17763	6.17815	0.77646	54.07237	0.19622	0.09072	0.21570

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.04524	0.15052	0.17117
#2	0.04586	0.14878	0.17477
<b>Mean</b>	<b>0.04555</b>	<b>0.14965</b>	<b>0.17297</b>
%RSD	0.96297	0.82345	1.47276

Method : Paragon File : 111010A

Printed : 10/11/2011 11:37:57

SampleId1 : 1109362-3      SampleId2 :  
 Analysis commenced : 10/10/2011 16:46:49  
 Dilution ratio : 1.00000 to 1.00000      Tray :

[SAMPLE]

Position : TUBE84

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00047	31.38283	0.13353	0.00874	0.42928	0.00405	0.00261	74.91456	0.00070
#2	-0.00102	31.38269	0.14234	0.00861	0.42949	0.00402	-0.00096	74.96731	0.00016
<b>Mean</b>	<b>-0.00075</b>	<b>31.38276</b>	<b>0.13794</b>	<b>0.00868</b>	<b>0.42938</b>	<b>0.00404</b>	<b>0.00083</b>	<b>74.94093</b>	<b>0.00043</b>
%RSD	51.95238	0.00031	4.51507	1.12356	0.03486	0.60250	305.14968	0.04976	88.67906
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.02217	0.02134	0.03520	103.75658	6.91363	0.03544	11.56719	1.60604	0.43517
#2	0.02217	0.02109	0.03553	103.94261	6.90928	0.03546	11.57920	1.61059	0.43401
<b>Mean</b>	<b>0.02217</b>	<b>0.02121</b>	<b>0.03536</b>	<b>103.84960</b>	<b>6.91146</b>	<b>0.03545</b>	<b>11.57320</b>	<b>1.60832</b>	<b>0.43459</b>
%RSD	0.00011	0.82906	0.66728	0.12667	0.04444	0.04034	0.07340	0.20029	0.18813
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	0.21379	0.03076	1.96061	0.13590	0.13646	30.32319	0.00079	0.19353	0.21395
#2	0.21384	0.03124	1.98884	0.13498	0.13772	30.40158	0.00301	0.19846	0.20584
<b>Mean</b>	<b>0.21382</b>	<b>0.03100</b>	<b>1.97473</b>	<b>0.13544</b>	<b>0.13709</b>	<b>30.36238</b>	<b>0.00190</b>	<b>0.19599</b>	<b>0.20989</b>
%RSD	0.01591	1.08475	1.01094	0.48075	0.64805	0.18257	82.65239	1.77760	2.73465
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	11.09597	0.00250	0.19255	0.06351	0.18563	-0.00258	3.14441	0.89546	0.14568
#2	11.11382	-0.00072	0.19327	0.05627	0.18576	0.00196	3.15527	0.89698	0.14771
<b>Mean</b>	<b>11.10490</b>	<b>0.00089</b>	<b>0.19291</b>	<b>0.05989</b>	<b>0.18569</b>	<b>-0.00031</b>	<b>3.14984</b>	<b>0.89622</b>	<b>0.14670</b>
%RSD	0.11372	255.39531	0.26555	8.55115	0.04725	1034.28365	0.24374	0.12046	0.98151
	Zr ppm	Pb calc	Se calc						
#1	0.04538	0.13627	0.20715						
#2	0.04586	0.13681	0.20338						
<b>Mean</b>	<b>0.04562</b>	<b>0.13654</b>	<b>0.20527</b>						
%RSD	0.74814	0.27520	1.29994						

Method : Paragon      File : 111010A  
 SampleId1 : 1109362-4      SampleId2 :  
 Analysis commenced : 10/10/2011 16:48:41  
 Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:37:57

[SAMPLE]

Position : TUBE85

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
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#1	-0.00114	34.82355	0.06055	0.01019	0.52575	0.00365	-0.00105	62.18147	0.00082
#2	-0.00114	34.88723	0.05686	0.00971	0.52847	0.00361	-0.00024	62.09441	0.00063
<b>Mean</b>	<b>-0.00114</b>	<b>34.85539</b>	<b>0.05870</b>	<b>0.00995</b>	<b>0.52711</b>	<b>0.00363</b>	<b>-0.00065</b>	<b>62.13794</b>	<b>0.00073</b>
%RSD	0.19122	0.12920	4.44536	3.42854	0.36489	0.76023	88.82315	0.09907	19.28758

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	0.02437	0.02877	0.04094	93.66245	8.22011	0.03467	12.79462	1.60460	0.14477
#2	0.02449	0.02931	0.04103	93.68061	8.24623	0.03484	12.83027	1.60628	0.14531
<b>Mean</b>	<b>0.02443</b>	<b>0.02904</b>	<b>0.04098</b>	<b>93.67153</b>	<b>8.23317</b>	<b>0.03476</b>	<b>12.81245</b>	<b>1.60544</b>	<b>0.14504</b>
%RSD	0.36035	1.30869	0.14141	0.01370	0.22432	0.33500	0.19675	0.07392	0.26474

	<b>Na</b> ppm	<b>Ni</b> ppm	<b>P</b> ppm	<b>Pb I</b> ppm	<b>Pb II</b> ppm	<b>S</b> ppm	<b>Sb</b> ppm	<b>Se I</b> ppm	<b>Se II</b> ppm
#1	0.13840	0.03703	2.07007	0.08427	0.08808	14.28155	-0.00198	0.12360	0.14076
#2	0.13907	0.03816	2.05583	0.08504	0.09016	14.31709	0.00103	0.12731	0.13924
<b>Mean</b>	<b>0.13873</b>	<b>0.03760</b>	<b>2.06295</b>	<b>0.08465</b>	<b>0.08912</b>	<b>14.29932</b>	<b>-0.00048</b>	<b>0.12546</b>	<b>0.14000</b>
%RSD	0.34294	2.12420	0.48810	0.63891	1.65412	0.17576	446.77448	2.08795	0.76987

	<b>Si</b> ppm	<b>Sn</b> ppm	<b>Sr</b> ppm	<b>Th</b> ppm	<b>Ti</b> ppm	<b>Tl</b> ppm	<b>U</b> ppm	<b>V</b> ppm	<b>Zn</b> ppm
#1	15.94630	0.00308	0.17065	0.05446	0.29824	0.00147	0.70131	0.44983	0.15906
#2	15.99947	-0.00049	0.17128	0.05153	0.29850	-0.00571	0.70591	0.45012	0.15819
<b>Mean</b>	<b>15.97289</b>	<b>0.00130</b>	<b>0.17096</b>	<b>0.05300</b>	<b>0.29837</b>	<b>-0.00212</b>	<b>0.70361</b>	<b>0.44998</b>	<b>0.15862</b>
%RSD	0.23537	195.06729	0.25954	3.90936	0.06079	239.83918	0.46287	0.04504	0.38905

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.02556	0.08681	0.13505
#2	0.02553	0.08846	0.13526
<b>Mean</b>	<b>0.02555</b>	<b>0.08763</b>	<b>0.13516</b>
%RSD	0.08796	1.32755	0.11348

Method : Paragon File : 111010A  
SampleId1 : 1109362-5 SampleId2 :  
Analysis commenced : 10/10/2011 16:50:35  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:57  
[SAMPLE]

Position : TUBE86

Final concentrations

	<b>Ag</b> ppm	<b>Al</b> ppm	<b>As</b> ppm	<b>B</b> ppm	<b>Ba</b> ppm	<b>Be</b> ppm	<b>Bi</b> ppm	<b>Ca</b> ppm	<b>Cd</b> ppm
#1	-0.00119	34.05234	0.02299	0.00895	0.58286	0.00328	-0.00423	52.31211	0.00031
#2	-0.00095	34.04069	0.02876	0.00840	0.58254	0.00328	-0.00163	52.09067	0.00060
<b>Mean</b>	<b>-0.00107</b>	<b>34.04651</b>	<b>0.02587</b>	<b>0.00868</b>	<b>0.58270</b>	<b>0.00328</b>	<b>-0.00293</b>	<b>52.20139</b>	<b>0.00045</b>
%RSD	15.55733	0.02420	15.77001	4.49422	0.03861	0.09216	62.83791	0.29996	44.78180

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	0.02391	0.03051	0.03660	77.22647	9.35619	0.03250	13.77107	1.32100	0.00602

#2	0.02343	0.03083	0.03744	76.97476	9.35642	0.03248	13.75283	1.31845	0.00453
<b>Mean</b>	<b>0.02367</b>	<b>0.03067</b>	<b>0.03702</b>	<b>77.10062</b>	<b>9.35630</b>	<b>0.03249</b>	<b>13.76195</b>	<b>1.31973</b>	<b>0.00528</b>
%RSD	1.44685	0.73108	1.61478	0.23085	0.00173	0.03772	0.09376	0.13645	19.99644

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.09765	0.04423	2.08104	0.05054	0.05510	2.86122	0.00228	-0.01205	0.01523
#2	0.09761	0.04405	2.04159	0.04907	0.05591	2.81444	0.00070	-0.00651	0.01031
<b>Mean</b>	<b>0.09763</b>	<b>0.04414</b>	<b>2.06131</b>	<b>0.04981</b>	<b>0.05550</b>	<b>2.83783</b>	<b>0.00149</b>	<b>-0.00928</b>	<b>0.01277</b>
%RSD	0.03479	0.28572	1.35335	2.08535	1.02445	1.16546	74.57910	42.14685	27.24433

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	2.88159	0.00394	0.18550	0.05681	0.17836	-0.00537	0.02107	0.10783	0.16313
#2	2.88695	-0.00071	0.18507	0.05512	0.17787	-0.00255	0.03393	0.10764	0.16371
<b>Mean</b>	<b>2.88427</b>	<b>0.00161</b>	<b>0.18529</b>	<b>0.05597</b>	<b>0.17811</b>	<b>-0.00396</b>	<b>0.02750</b>	<b>0.10774</b>	<b>0.16342</b>
%RSD	0.13129	203.49944	0.16217	2.14038	0.19702	50.27577	33.08420	0.12473	0.25176

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.02135	0.05358	0.00614
#2	0.02144	0.05363	0.00471
<b>Mean</b>	<b>0.02139</b>	<b>0.05361</b>	<b>0.00542</b>
%RSD	0.31613	0.06226	18.75489

Method : Paragon File : 111010A  
SampleId1 : 1109362-6 SampleId2 :  
Analysis commenced : 10/10/2011 16:52:26  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:57  
[SAMPLE]

Position : TUBE87

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00114	59.50515	0.03642	0.01819	0.92936	0.00496	0.00304	40.31275	0.00068
#2	-0.00109	59.62683	0.03585	0.01805	0.93146	0.00499	-0.00280	40.15681	0.00068
<b>Mean</b>	<b>-0.00112</b>	<b>59.56599</b>	<b>0.03614</b>	<b>0.01812</b>	<b>0.93041</b>	<b>0.00497</b>	<b>0.00012</b>	<b>40.23478</b>	<b>0.00068</b>
%RSD	3.05200	0.14445	1.11070	0.53800	0.15930	0.34193	3414.21775	0.27405	0.40289

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.03526	0.05109	0.06823	113.68007	16.33398	0.04844	18.39380	2.00810	0.00745
#2	0.03599	0.05139	0.06840	113.44272	16.38438	0.04869	18.43870	2.00544	0.00595
<b>Mean</b>	<b>0.03563</b>	<b>0.05124</b>	<b>0.06831</b>	<b>113.56140</b>	<b>16.35918</b>	<b>0.04857</b>	<b>18.41625</b>	<b>2.00677</b>	<b>0.00670</b>
%RSD	1.44619	0.40967	0.17696	0.14779	0.21785	0.36590	0.17239	0.09347	15.74613

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.16258	0.06744	3.15955	0.07241	0.07968	2.07809	0.00008	-0.01519	0.01513
#2	0.16407	0.06759	3.17458	0.07034	0.07916	2.08686	0.00128	-0.00586	0.01145

<b>Mean</b>	<b>0.16332</b>	<b>0.06752</b>	<b>3.16706</b>	<b>0.07138</b>	<b>0.07942</b>	<b>2.08248</b>	<b>0.00068</b>	<b>-0.01053</b>	<b>0.01329</b>
%RSD	0.64524	0.15567	0.33572	2.04226	0.45846	0.29753	125.79169	62.66303	19.58876
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	9.35301	0.00693	0.24092	0.06665	0.37203	-0.00386	0.04414	0.16954	0.23908
#2	9.37507	0.01229	0.24115	0.06628	0.37284	-0.00086	0.04430	0.17076	0.23966
<b>Mean</b>	<b>9.36404</b>	<b>0.00961</b>	<b>0.24103</b>	<b>0.06647</b>	<b>0.37244</b>	<b>-0.00236</b>	<b>0.04422</b>	<b>0.17015</b>	<b>0.23937</b>
%RSD	0.16662	39.44662	0.06810	0.39356	0.15243	89.78717	0.25842	0.50939	0.17196
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.03018	0.07726	0.00503						
#2	0.03035	0.07623	0.00568						
<b>Mean</b>	<b>0.03026</b>	<b>0.07674</b>	<b>0.00536</b>						
%RSD	0.39852	0.94898	8.61134						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:58

SampleId1 : 1109362-7

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 16:54:17

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE88

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00060	51.83099	0.03122	0.01178	0.80708	0.00443	0.00394	56.07437	0.00063
#2	-0.00108	52.09075	0.03273	0.01130	0.80959	0.00443	0.00070	56.03076	0.00060
<b>Mean</b>	<b>-0.00084</b>	<b>51.96087</b>	<b>0.03197</b>	<b>0.01154</b>	<b>0.80834</b>	<b>0.00443</b>	<b>0.00232</b>	<b>56.05256</b>	<b>0.00062</b>
%RSD	41.00381	0.35349	3.34729	2.95741	0.22028	0.04284	98.74466	0.05502	3.15720
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.03491	0.04672	0.06061	100.57264	12.57515	0.04489	17.71629	1.74452	0.00561
#2	0.03461	0.04618	0.06147	100.58546	12.60885	0.04505	17.76118	1.74604	0.00541
<b>Mean</b>	<b>0.03476</b>	<b>0.04645</b>	<b>0.06104</b>	<b>100.57905</b>	<b>12.59200</b>	<b>0.04497</b>	<b>17.73873</b>	<b>1.74528</b>	<b>0.00551</b>
%RSD	0.61220	0.82002	0.99297	0.00901	0.18923	0.25437	0.17891	0.06165	2.60940
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.50274	0.06605	2.70741	0.06601	0.06970	1.39199	0.00144	-0.00603	0.02242
#2	0.50689	0.06557	2.68258	0.06234	0.07047	1.41242	0.00256	-0.00525	0.02017
<b>Mean</b>	<b>0.50481</b>	<b>0.06581</b>	<b>2.69500</b>	<b>0.06418</b>	<b>0.07009</b>	<b>1.40220</b>	<b>0.00200</b>	<b>-0.00564</b>	<b>0.02130</b>
%RSD	0.58154	0.51106	0.65165	4.04299	0.77151	1.03022	39.50941	9.79309	7.46861
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	2.83059	0.00778	0.26032	0.05998	0.25794	-0.00174	0.04441	0.14707	0.21900
#2	2.83478	0.00921	0.26118	0.06329	0.25859	0.00218	0.04209	0.14736	0.21725
<b>Mean</b>	<b>2.83268</b>	<b>0.00849</b>	<b>0.26075</b>	<b>0.06164</b>	<b>0.25827</b>	<b>0.00022</b>	<b>0.04325</b>	<b>0.14722</b>	<b>0.21813</b>

%RSD	0.10480	11.90020	0.23094	3.80685	0.17669	1245.75010	3.78801	0.13692	0.56606
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.02818	0.06848	0.01295						
#2	0.02750	0.06776	0.01171						
<b>Mean</b>	<b>0.02784</b>	<b>0.06812</b>	<b>0.01233</b>						
%RSD	1.72078	0.73895	7.11447						

Method : Paragon File : 111010A  
SampleId1 : 1109362-8 SampleId2 :  
Analysis commenced : 10/10/2011 16:56:09  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:58  
[SAMPLE]  
Position : TUBE89

# Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00072	31.72162	0.02431	0.00943	0.47992	0.00282	-0.00262	27.36254	0.00047
#2	-0.00019	31.68332	0.02393	0.01109	0.47843	0.00280	-0.00100	27.28000	0.00066
<b>Mean</b>	<b>-0.00045</b>	<b>31.70247</b>	<b>0.02412</b>	<b>0.01026</b>	<b>0.47918</b>	<b>0.00281</b>	<b>-0.00181</b>	<b>27.32127</b>	<b>0.00057</b>
%RSD	83.49470	0.08542	1.10910	11.39969	0.21879	0.50843	63.37195	0.21363	23.84861

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.02064	0.02841	0.03502	66.50222	8.72779	0.02719	10.95418	1.16575	0.01172
#2	0.02113	0.02865	0.03493	66.29878	8.71335	0.02712	10.92933	1.16297	0.01070
<b>Mean</b>	<b>0.02089</b>	<b>0.02853</b>	<b>0.03498</b>	<b>66.40050</b>	<b>8.72057</b>	<b>0.02716</b>	<b>10.94176</b>	<b>1.16436</b>	<b>0.01121</b>
%RSD	1.63892	0.59058	0.18673	0.21664	0.11713	0.17302	0.16058	0.16877	6.41694

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.07494	0.03576	2.03738	0.04662	0.05288	1.76855	-0.00088	0.00528	0.01698
#2	0.07470	0.03626	2.05256	0.04654	0.05224	1.75103	-0.00055	0.00822	0.02224
<b>Mean</b>	<b>0.07482</b>	<b>0.03601</b>	<b>2.04497</b>	<b>0.04658</b>	<b>0.05256</b>	<b>1.75979</b>	<b>-0.00072</b>	<b>0.00675</b>	<b>0.01961</b>
%RSD	0.22694	0.99226	0.52463	0.12810	0.86492	0.70390	31.85288	30.85805	18.97868

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	7.49639	-0.00008	0.22070	0.04337	0.25148	-0.00236	0.06357	0.10847	0.13986
#2	7.47730	0.00350	0.22009	0.04234	0.25089	0.00229	0.07236	0.10783	0.13899
<b>Mean</b>	<b>7.48685</b>	<b>0.00171</b>	<b>0.22039</b>	<b>0.04286</b>	<b>0.25118</b>	<b>-0.00003</b>	<b>0.06796</b>	<b>0.10815</b>	<b>0.13942</b>
%RSD	0.18036	147.99655	0.19539	1.70494	0.16769	10014.33248	9.14959	0.41828	0.44257

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.01886	0.05080	0.01308
#2	0.01864	0.05034	0.01757
<b>Mean</b>	<b>0.01875</b>	<b>0.05057</b>	<b>0.01533</b>
%RSD	0.83303	0.63890	20.72069

ted: 10/11/2011 11:38:22 User: MIKE LUNDGREEN  
 Method : Paragon File : 111010A  
 SampleId1 : 1109362-9 SampleId2 :  
 Analysis commenced : 10/10/2011 16:58:00  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:58  
 [SAMPLE]  
 Position : TUBE90

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00070	38.70009	0.03897	0.02584	0.62693	0.00363	-0.00215	88.35245	0.00121
#2	-0.00099	38.65622	0.03585	0.02432	0.62693	0.00360	0.00061	88.25373	0.00103
Mean	-0.00084	38.67815	0.03741	0.02508	0.62693	0.00361	-0.00077	88.30309	0.00112
%RSD	24.84252	0.08019	5.90039	4.27543	0.00000	0.51262	254.45770	0.07905	11.65262
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.02436	0.03382	0.04786	87.36876	14.25844	0.03940	19.89513	1.57120	0.03376
#2	0.02375	0.03414	0.04820	87.35648	14.24038	0.03926	19.84562	1.57176	0.03369
Mean	0.02406	0.03398	0.04803	87.36262	14.24941	0.03933	19.87038	1.57148	0.03373
%RSD	1.78572	0.67152	0.50107	0.00994	0.08959	0.23890	0.17618	0.02516	0.14221
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	0.22543	0.04441	3.69391	0.06760	0.06755	8.75140	-0.00230	0.02738	0.04743
#2	0.22404	0.04577	3.69061	0.06600	0.07041	8.71609	0.00114	0.03154	0.04721
Mean	0.22474	0.04509	3.69226	0.06680	0.06898	8.73375	-0.00058	0.02946	0.04732
%RSD	0.43899	2.14429	0.06318	1.69770	2.92695	0.28595	418.87671	9.96432	0.32959
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	19.44913	0.00554	0.31283	0.04012	0.33976	-0.00605	0.49548	0.23320	0.20416
#2	19.41820	0.00411	0.31303	0.03755	0.34042	-0.00059	0.49780	0.23259	0.20620
Mean	19.43366	0.00482	0.31293	0.03883	0.34009	-0.00332	0.49664	0.23289	0.20518
%RSD	0.11254	20.97913	0.04380	4.68302	0.13766	116.42722	0.32992	0.18314	0.70203
	Zr ppm	Pb calc	Se calc						
#1	0.02354	0.06757	0.04075						
#2	0.02373	0.06894	0.04199						
Mean	0.02364	0.06825	0.04137						
%RSD	0.57824	1.41971	2.11133						

Method : Paragon File : 111010A  
 SampleId1 : CCV SampleId2 :  
 Analysis commenced : 10/10/2011 17:00:51  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:58  
 [CV]  
 Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19446	52.20159	0.49219	0.98501	0.96312	0.47622	0.52066	50.87432	0.49909
#2	0.19585	52.45592	0.50398	0.98909	0.96753	0.47856	0.51986	51.13454	0.49982
Mean	0.19516	52.32876	0.49808	0.98705	0.96532	0.47739	0.52026	51.00443	0.49945
%RSD	0.50571	0.34367	1.67359	0.29240	0.32286	0.34648	0.10789	0.36076	0.10406
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.47911	0.95313	1.01702	19.93571	48.49209	0.48640	51.07091	0.94782	0.96473
#2	0.48094	0.95707	1.02086	20.04221	48.62943	0.48799	51.29788	0.95289	0.96869
Mean	0.48002	0.95510	1.01894	19.98896	48.56076	0.48719	51.18439	0.95036	0.96671
%RSD	0.26923	0.29207	0.26654	0.37674	0.19998	0.23023	0.31356	0.37689	0.28959
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	49.03015	0.96427	5.17942	0.97916	0.97048	5.19140	0.47611	0.99401	0.98807
#2	49.16632	0.97218	5.21555	0.97851	0.96853	5.17088	0.48300	1.00950	0.98332
Mean	49.09823	0.96822	5.19749	0.97883	0.96950	5.18114	0.47955	1.00175	0.98569
%RSD	0.19611	0.57737	0.49151	0.04706	0.14205	0.28004	1.01656	1.09369	0.34106
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.83837	1.04724	0.48104	0.33752	0.46487	0.52165	4.72778	0.47575	0.97114
#2	4.85142	1.04760	0.48354	0.35034	0.46617	0.51825	4.74854	0.47712	0.98342
Mean	4.84490	1.04742	0.48229	0.34393	0.46552	0.51995	4.73816	0.47644	0.97728
%RSD	0.19040	0.02411	0.36685	2.63725	0.19619	0.46210	0.30978	0.20272	0.88883
	Zr ppm	Pb calc	Se calc						
#1	0.97856	0.97337	0.99005						
#2	0.98279	0.97185	0.99204						
Mean	0.98067	0.97261	0.99104						
%RSD	0.30493	0.11022	0.14188						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:37:58

SampleId1 : CCB

SampleId2 :

[CB]

Analysis commenced : 10/10/2011 17:02:47

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00006	0.06366	0.00209	-0.00187	-0.00009	0.00047	-0.00176	0.03422	-0.00017
#2	-0.00127	0.04858	-0.00359	-0.00270	-0.00027	0.00039	-0.00485	0.03084	-0.00069
Mean	-0.00066	0.05612	-0.00075	-0.00228	-0.00018	0.00043	-0.00330	0.03253	-0.00043
%RSD	129.33408	18.99862	533.94326	25.61312	69.57996	12.89721	66.20956	7.34748	86.90422
	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo



	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00022	-0.00003	-0.00195	0.03049	-0.02644	0.00390	0.00387	0.00053	-0.00062
#2	-0.00138	-0.00169	-0.00288	0.02862	-0.04383	0.00386	-0.00436	0.00038	-0.00212
<b>Mean</b>	<b>-0.00080</b>	<b>-0.00086</b>	<b>-0.00242</b>	<b>0.02955</b>	<b>-0.03514</b>	<b>0.00388</b>	<b>-0.00025</b>	<b>0.00045</b>	<b>-0.00137</b>
%RSD	101.73133	136.84348	27.14769	4.47142	34.99777	0.73653	2357.80219	24.25139	76.99987

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.04973	0.00018	0.00954	-0.00140	0.00044	-0.01356	0.00076	0.00350	-0.00172
#2	-0.05074	-0.00226	-0.00015	-0.00924	0.00303	-0.02521	-0.00535	-0.00346	-0.00048
<b>Mean</b>	<b>-0.05024</b>	<b>-0.00104</b>	<b>0.00470</b>	<b>-0.00532</b>	<b>0.00173</b>	<b>-0.01938</b>	<b>-0.00230</b>	<b>0.00002</b>	<b>-0.00110</b>
%RSD	1.41731	165.86342	145.78873	104.08180	105.76671	42.51269	188.06874	22140.73024	79.51790

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01646	0.00486	-0.00266	0.00461	-0.00125	0.00335	-0.01466	0.00020	0.00030
#2	-0.02265	-0.00300	-0.00272	0.00030	-0.00128	-0.00139	-0.03196	-0.00110	-0.00086
<b>Mean</b>	<b>-0.01956</b>	<b>0.00093</b>	<b>-0.00269</b>	<b>0.00245</b>	<b>-0.00126</b>	<b>0.00098</b>	<b>-0.02331</b>	<b>-0.00045</b>	<b>-0.00028</b>
%RSD	22.38819	598.22452	1.76787	124.37756	1.85009	342.24429	52.50538	204.61776	296.08845

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00122	-0.00018	0.00002
#2	0.00088	-0.00106	-0.00147
<b>Mean</b>	<b>0.00105</b>	<b>-0.00062</b>	<b>-0.00073</b>
%RSD	22.86873	100.92496	145.76120

Method : Paragon File : 111010A  
SampleId1 : 1109362-10 SampleId2 :  
Analysis commenced : 10/10/2011 17:04:44  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:58  
[SAMPLE]

Position : TUBE91

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00083	28.73556	0.04957	0.01061	0.41161	0.00324	-0.00098	69.49982	0.00050
#2	-0.00059	28.71242	0.05269	0.01192	0.41175	0.00322	-0.00113	69.56881	0.00067
<b>Mean</b>	<b>-0.00071</b>	<b>28.72399</b>	<b>0.05113</b>	<b>0.01126</b>	<b>0.41168</b>	<b>0.00323</b>	<b>-0.00106</b>	<b>69.53432</b>	<b>0.00059</b>
%RSD	23.55848	0.05695	4.31797	8.22378	0.02423	0.58939	10.50072	0.07016	20.11867

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.01855	0.02281	0.03896	75.61522	7.85916	0.02989	12.71006	1.45699	0.12536
#2	0.01958	0.02321	0.03946	75.68907	7.84176	0.02992	12.71877	1.45938	0.12407
<b>Mean</b>	<b>0.01907</b>	<b>0.02301</b>	<b>0.03921</b>	<b>75.65215</b>	<b>7.85046</b>	<b>0.02990</b>	<b>12.71441</b>	<b>1.45819</b>	<b>0.12471</b>
%RSD	3.81996	1.22181	0.90624	0.06902	0.15673	0.05465	0.04841	0.11601	0.73115

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm

#1	0.11077	0.03014	2.24127	0.08591	0.09141	14.10090	0.00104	0.14029	0.15981
#2	0.11082	0.03011	2.22188	0.08943	0.09362	14.18974	0.00135	0.15578	0.16048
<b>Mean</b>	<b>0.11079</b>	<b>0.03012</b>	<b>2.23158</b>	<b>0.08767</b>	<b>0.09252</b>	<b>14.14532</b>	<b>0.00119</b>	<b>0.14803</b>	<b>0.16014</b>
%RSD	0.03066	0.06977	0.61456	2.83789	1.68744	0.44411	18.86391	7.39916	0.29572

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	14.34829	0.00353	0.21211	0.04445	0.22090	0.00014	0.94568	0.45370	0.14102
#2	14.35287	0.00174	0.21225	0.04707	0.22118	-0.00219	0.95948	0.45520	0.14277
<b>Mean</b>	<b>14.35058</b>	<b>0.00264</b>	<b>0.21218</b>	<b>0.04576</b>	<b>0.22104</b>	<b>-0.00102</b>	<b>0.95258</b>	<b>0.45445</b>	<b>0.14190</b>
%RSD	0.02255	47.93609	0.04831	4.04864	0.08998	160.71867	1.02485	0.23352	0.86972

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.02814	0.08958	0.15331
#2	0.02761	0.09223	0.15891
<b>Mean</b>	<b>0.02787</b>	<b>0.09090</b>	<b>0.15611</b>
%RSD	1.34040	2.05692	2.53878

Method : Paragon File : 111010A  
SampleId1 : 1109362-11 SampleId2 :  
Analysis commenced : 10/10/2011 17:06:36  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:59  
[SAMPLE]  
Position : TUBE92

# Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00089	66.00416	0.06632	0.00613	0.23623	0.00498	0.00384	69.54677	0.00032
#2	-0.00094	66.45519	0.06093	0.00633	0.23662	0.00496	0.00351	69.69106	0.00070
<b>Mean</b>	<b>-0.00092</b>	<b>66.22968</b>	<b>0.06362</b>	<b>0.00623</b>	<b>0.23642</b>	<b>0.00497</b>	<b>0.00368</b>	<b>69.61892</b>	<b>0.00051</b>
%RSD	4.21962	0.48155	5.99489	2.34736	0.11574	0.27642	6.25418	0.14656	52.57488

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.02939	0.01846	0.04182	174.86936	7.16650	0.07215	26.42331	1.55211	0.37859
#2	0.03006	0.01873	0.04130	175.15730	7.19280	0.07248	26.47048	1.55523	0.38029
<b>Mean</b>	<b>0.02973</b>	<b>0.01860</b>	<b>0.04156</b>	<b>175.01333</b>	<b>7.17965</b>	<b>0.07232</b>	<b>26.44689</b>	<b>1.55367</b>	<b>0.37944</b>
%RSD	1.58873	1.01619	0.87976	0.11634	0.25902	0.31914	0.12612	0.14175	0.31674

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.12283	0.03014	2.02571	0.11637	0.11883	13.11240	0.00367	0.05049	0.08717
#2	0.12393	0.03094	2.04275	0.11666	0.12207	13.09170	0.00257	0.05551	0.09224
<b>Mean</b>	<b>0.12338</b>	<b>0.03054</b>	<b>2.03423</b>	<b>0.11652</b>	<b>0.12045</b>	<b>13.10205</b>	<b>0.00312</b>	<b>0.05300</b>	<b>0.08971</b>
%RSD	0.63339	1.85813	0.59227	0.17622	1.90250	0.11174	24.90965	6.69299	3.99995

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.15356	-0.00313	0.31517	0.05596	0.10910	0.01011	0.89253	0.55832	0.20416

#2	4.17394	0.00616	0.31607	0.05214	0.10885	0.00723	0.89753	0.56121	0.20561
<b>Mean</b>	<b>4.16375</b>	<b>0.00152</b>	<b>0.31562</b>	<b>0.05405</b>	<b>0.10898</b>	<b>0.00867</b>	<b>0.89503</b>	<b>0.55977</b>	<b>0.20489</b>
%RSD	0.34609	433.44691	0.20194	5.00064	0.16634	23.50836	0.39503	0.36492	0.50216

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.03973	0.11801	0.07496
#2	0.04028	0.12027	0.08001
<b>Mean</b>	<b>0.04001</b>	<b>0.11914</b>	<b>0.07748</b>
%RSD	0.97932	1.34029	4.61337

Method : Paragon File : 111010A  
SampleId1 : 1109362-12 SampleId2 :  
Analysis commenced : 10/10/2011 17:08:28  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:59  
[SAMPLE]

Position : TUBE93

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00094	24.03700	0.03065	0.00902	0.39567	0.00264	0.00038	170.84328	0.00079
#2	-0.00070	24.15294	0.02337	0.00819	0.39803	0.00263	-0.00367	170.49122	0.00091
<b>Mean</b>	<b>-0.00082</b>	<b>24.09497</b>	<b>0.02701</b>	<b>0.00861</b>	<b>0.39685</b>	<b>0.00264</b>	<b>-0.00165</b>	<b>170.66725</b>	<b>0.00085</b>
%RSD	21.17134	0.34022	19.06996	6.79532	0.42094	0.17874	174.06029	0.14586	9.88518

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.01892	0.02440	0.03838	58.50693	8.34499	0.02546	9.89802	1.16146	0.00283
#2	0.01813	0.02364	0.03872	58.45470	8.39907	0.02556	9.90671	1.15995	0.00331
<b>Mean</b>	<b>0.01853</b>	<b>0.02402</b>	<b>0.03855</b>	<b>58.48082</b>	<b>8.37203</b>	<b>0.02551</b>	<b>9.90237</b>	<b>1.16071</b>	<b>0.00307</b>
%RSD	2.99913	2.23038	0.62260	0.06315	0.45678	0.25624	0.06207	0.09190	10.92744

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.13186	0.03626	1.74028	0.06875	0.07081	2.01676	-0.00169	0.00059	0.01441
#2	0.13359	0.03564	1.75706	0.06753	0.07272	1.99340	-0.00146	0.00452	0.01789
<b>Mean</b>	<b>0.13273</b>	<b>0.03595</b>	<b>1.74867</b>	<b>0.06814</b>	<b>0.07176</b>	<b>2.00508</b>	<b>-0.00157</b>	<b>0.00256</b>	<b>0.01615</b>
%RSD	0.92169	1.22776	0.67842	1.27263	1.88702	0.82396	10.53525	108.76079	15.22166

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.41355	-0.00003	0.23189	0.03503	0.20793	0.00094	0.03612	0.21863	0.12328
#2	3.41915	0.00033	0.23239	0.03582	0.20848	0.00120	0.03962	0.21787	0.12154
<b>Mean</b>	<b>3.41635</b>	<b>0.00015</b>	<b>0.23214</b>	<b>0.03543</b>	<b>0.20820</b>	<b>0.00107</b>	<b>0.03787</b>	<b>0.21825</b>	<b>0.12241</b>
%RSD	0.11584	168.59181	0.15022	1.57067	0.18823	16.74906	6.53124	0.24372	1.00805

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.01800	0.07012	0.00981
#2	0.01733	0.07099	0.01344

Mean 0.01767 0.07056 0.01162UNDGREEN  
%RSD 2.66993 0.87090 22.07137

Method : Paragon File : 111010A  
SampleId1 : 1109362-13 SampleId2 :  
Analysis commenced : 10/10/2011 17:10:20  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:59  
[SAMPLE]

Position : TUBE94

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00074	31.60281	0.02233	0.01791	0.44773	0.00305	-0.00242	26.57107	0.00091
#2	-0.00108	31.95717	0.02214	0.01653	0.45052	0.00306	0.00018	26.54945	0.00090
Mean	-0.00091	31.77999	0.02223	0.01722	0.44912	0.00305	-0.00112	26.56026	0.00091
%RSD	26.76613	0.78845	0.60173	5.65995	0.43889	0.36756	164.01031	0.05758	1.23768
	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.02331	0.03091	0.05028	74.77285	10.40086	0.03028	11.46114	1.28201	0.00283
#2	0.02295	0.03016	0.04994	74.75275	10.49998	0.03058	11.49718	1.28162	0.00385
Mean	0.02313	0.03053	0.05011	74.76280	10.45042	0.03043	11.47916	1.28182	0.00334
%RSD	1.10059	1.75182	0.48412	0.01901	0.67066	0.68471	0.22200	0.02194	21.51596
	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.09160	0.04247	2.12003	0.05730	0.06467	1.39782	0.00180	-0.00469	0.00950
#2	0.09400	0.04215	2.13825	0.05921	0.06431	1.41242	0.00237	-0.00940	0.00899
Mean	0.09280	0.04231	2.12914	0.05826	0.06449	1.40512	0.00209	-0.00705	0.00924
%RSD	1.82997	0.54644	0.60496	2.32045	0.39390	0.73435	19.38894	47.20127	3.92229
	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	10.71694	0.00420	0.20639	0.04955	0.25870	-0.00127	0.02389	0.10206	0.27838
#2	10.79224	-0.00152	0.20771	0.04477	0.25881	-0.00556	0.02506	0.10114	0.27838
Mean	10.75459	0.00134	0.20705	0.04716	0.25875	-0.00342	0.02447	0.10160	0.27838
%RSD	0.49509	301.37034	0.44882	7.16933	0.03165	88.69746	3.37385	0.64170	0.00000
	Zr	Pb	Se						
	ppm	calc	calc						
#1	0.01835	0.06222	0.00477						
#2	0.01858	0.06262	0.00286						
Mean	0.01847	0.06242	0.00382						
%RSD	0.84935	0.44972	35.34511						

Method : Paragon File : 111010A  
SampleId1 : 1109362-14 SampleId2 :  
Analysis commenced : 10/10/2011 17:12:12  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:59  
[SAMPLE]

Position : TUBE95

Final concentrations38:22 User: MIKE LUNDGREEN

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00096	34.73761	0.02866	0.01564	1.02819	0.00390	0.00152	27.40828	0.00101
#2	-0.00008	34.60819	0.03074	0.01709	1.02770	0.00388	-0.00172	27.56988	0.00154
Mean	-0.00052	34.67290	0.02970	0.01636	1.02795	0.00389	-0.00010	27.48908	0.00128
%RSD	118.90478	0.26393	4.95419	6.25589	0.03426	0.38714	2338.98046	0.41570	29.64999
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.02771	0.03617	0.05010	137.76701	13.65997	0.03235	14.42937	3.69791	0.00480
#2	0.02892	0.03628	0.05078	138.51678	13.56079	0.03220	14.43767	3.71340	0.00697
Mean	0.02832	0.03622	0.05044	138.14189	13.61038	0.03228	14.43352	3.70566	0.00589
%RSD	3.02424	0.20050	0.94853	0.38378	0.51530	0.32279	0.04065	0.29540	26.06987
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	0.12835	0.04762	2.97592	0.08490	0.08739	1.94667	0.00377	-0.01154	0.01673
#2	0.12706	0.04833	2.98883	0.08326	0.08463	1.93499	0.00312	-0.01689	0.01449
Mean	0.12771	0.04797	2.98238	0.08408	0.08601	1.94083	0.00344	-0.01421	0.01561
%RSD	0.71840	1.05153	0.30605	1.38245	2.26510	0.42559	13.35618	26.60845	10.17058
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	5.32109	0.00167	0.15819	0.06228	0.28215	-0.00407	0.03005	0.12214	0.20940
#2	5.31989	0.00274	0.15822	0.06194	0.28241	0.00508	0.03992	0.12257	0.21027
Mean	5.32049	0.00221	0.15820	0.06211	0.28228	0.00050	0.03499	0.12236	0.20983
%RSD	0.01588	34.32956	0.01294	0.38540	0.06425	1291.29489	19.96200	0.24724	0.29420
	Zr ppm	Pb calc	Se calc						
#1	0.02308	0.08656	0.00732						
#2	0.02333	0.08417	0.00404						
Mean	0.02321	0.08537	0.00568						
%RSD	0.73917	1.97561	40.80837						

Method : Paragon File : 111010A  
SampleId1 : IP111007-3MB SampleId2 :  
Analysis commenced : 10/10/2011 17:15:05  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:59  
[SAMPLE]  
Position : TUBE96

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00010	0.05349	-0.00066	-0.00428	-0.00048	0.00030	-0.00289	0.00380	-0.00083
#2	-0.00054	0.06518	-0.00434	-0.00470	-0.00034	0.00027	-0.00111	0.01056	-0.00053
Mean	-0.00022	0.05934	-0.00250	-0.00449	-0.00041	0.00029	-0.00200	0.00718	-0.00068
%RSD	203.49804	13.93073	104.27548	6.51420	24.42240	6.61133	62.97222	66.58171	31.03438

ted: 10/11/2011 11:38:22 User: MIKE LUNDGREEN

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00059	-0.00097	-0.00238	0.05635	-0.07274	0.00364	-0.02989	0.00108	-0.00266
#2	-0.00053	-0.00100	-0.00297	0.07057	-0.07613	0.00365	-0.02907	0.00147	-0.00239
Mean	-0.00056	-0.00098	-0.00267	0.06346	-0.07443	0.00365	-0.02948	0.00127	-0.00252
%RSD	7.70750	1.94133	15.82991	15.85419	3.21812	0.22411	1.97515	21.64877	7.60262

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.08104	-0.00264	0.00193	-0.00353	-0.00041	-0.02813	-0.00136	-0.00244	-0.00345
#2	-0.08104	-0.00190	-0.00222	-0.00273	0.00047	-0.02521	-0.00325	0.00069	-0.00025
Mean	-0.08104	-0.00227	-0.00015	-0.00313	0.00003	-0.02667	-0.00231	-0.00088	-0.00185
%RSD	0.00000	23.12061	2023.33398	17.95543	1883.32399	7.72523	57.87973	253.14689	122.01640

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01582	0.00093	-0.00309	-0.00030	-0.00146	0.00281	-0.02044	-0.00057	-0.00028
#2	-0.01507	-0.00407	-0.00307	0.00246	-0.00147	0.00564	-0.02045	-0.00050	0.00030
Mean	-0.01544	-0.00157	-0.00308	0.00108	-0.00147	0.00423	-0.02045	-0.00053	0.00001
%RSD	3.43828	225.04016	0.44127	181.24994	0.39864	47.29883	0.03350	9.72920	3161.40379

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00054	-0.00145	-0.00312
#2	0.00036	-0.00059	0.00006
Mean	0.00045	-0.00102	-0.00153
%RSD	29.64181	59.20818	147.04391

Method : Paragon File : 111010A  
SampleId1 : IP111007-3RVS SampleId2 :  
Analysis commenced : 10/10/2011 17:16:56  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:37:59

[SAMPLE]

Position : TUBE97

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00914	1.04367	0.05033	0.04528	0.04648	0.01015	0.10018	5.02052	0.01943
#2	0.00982	1.03570	0.04361	0.04597	0.04627	0.01005	0.09970	5.01868	0.01986
Mean	0.00948	1.03969	0.04697	0.04562	0.04638	0.01010	0.09994	5.01960	0.01964
%RSD	5.10595	0.54258	10.11314	1.06844	0.32093	0.66901	0.34348	0.02583	1.52524

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.01841	0.04763	0.04669	0.96139	7.56296	0.04118	4.91568	0.04658	0.09339
#2	0.01872	0.04803	0.04720	0.96495	7.49866	0.04088	4.90536	0.04681	0.09441
Mean	0.01856	0.04783	0.04694	0.96317	7.53081	0.04103	4.91052	0.04670	0.09390
%RSD	1.15156	0.59954	0.77443	0.26113	0.60377	0.51281	0.14862	0.35467	0.76646

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	7.98416	0.04916	1.03574	0.04468	0.04958	0.99225	0.09105	0.05030	0.04745
#2	7.90622	0.04818	1.01926	0.04913	0.04605	0.97475	0.09462	0.05064	0.04505
Mean	7.94519	0.04867	1.02750	0.04691	0.04782	0.98350	0.09284	0.05047	0.04625
%RSD	0.69367	1.42511	1.13371	6.71338	5.21960	1.25837	2.71483	0.46937	3.66657

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.25708	0.09811	0.04421	-0.00264	0.04368	0.10285	0.46543	0.04712	0.05001
#2	0.25505	0.10240	0.04403	-0.00119	0.04388	0.10158	0.46427	0.04726	0.05001
Mean	0.25606	0.10026	0.04412	-0.00191	0.04378	0.10222	0.46485	0.04719	0.05001
%RSD	0.56062	3.02587	0.29294	53.70357	0.33384	0.88081	0.17596	0.21264	0.00000

	Zr	Pb	Se
	ppm	calc	calc
#1	0.04742	0.04795	0.04840
#2	0.04815	0.04708	0.04691
Mean	0.04778	0.04751	0.04765
%RSD	1.08363	1.29662	2.20791

Method : Paragon File : 111010A  
SampleId1 : IP111007-3LCS SampleId2 :  
Analysis commenced : 10/10/2011 17:18:48  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:00  
[SAMPLE]

Position : TUBE98

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00004	0.02916	0.00133	-0.00401	-0.00086	0.00021	-0.00111	-0.00556	-0.00047
#2	-0.00030	0.03110	-0.00066	-0.00332	-0.00083	0.00021	-0.00679	-0.00582	-0.00052
Mean	-0.00013	0.03013	0.00034	-0.00366	-0.00084	0.00021	-0.00395	-0.00569	-0.00050
%RSD	182.84462	4.55908	417.84596	13.30927	2.93632	0.90953	101.75134	3.23062	7.83587

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00089	0.00000	-0.00273	0.00360	-0.07184	0.00365	-0.03401	-0.00017	-0.00191
#2	-0.00065	-0.00065	-0.00289	0.00339	-0.06867	0.00365	-0.03401	-0.00017	-0.00090
Mean	-0.00077	-0.00033	-0.00281	0.00350	-0.07026	0.00365	-0.03401	-0.00017	-0.00140
%RSD	22.28509	139.84948	4.20429	4.19847	3.18222	0.00000	0.00000	0.00000	51.23194

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.07845	-0.00217	10.09834	-0.00153	-0.00229	-0.02521	-0.00192	-0.00456	-0.00136
#2	-0.07864	-0.00163	10.06684	-0.00029	-0.00144	-0.02230	-0.00068	-0.00434	-0.00281
Mean	-0.07855	-0.00190	10.08259	-0.00091	-0.00186	-0.02376	-0.00130	-0.00445	-0.00208
%RSD	0.17260	19.90031	0.22087	96.47535	32.36568	8.67277	67.22037	3.49647	49.29013

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01679	-0.00372	-0.00313	-0.00509	-0.00162	0.00007	-0.00944	-0.00030	0.00263
#2	-0.01582	-0.00550	-0.00313	-0.00349	-0.00175	-0.00048	-0.01464	-0.00058	0.00321
<b>Mean</b>	<b>-0.01631</b>	<b>-0.00461</b>	<b>-0.00313</b>	<b>-0.00429</b>	<b>-0.00169</b>	<b>-0.00021</b>	<b>-0.01204</b>	<b>-0.00044</b>	<b>0.00292</b>
%RSD	4.23236	27.40833	0.00000	26.31805	5.54917	186.82133	30.49533	45.50541	14.07929

	Zr ppm	Pb calc	Se calc
#1	0.00107	-0.00204	-0.00242
#2	0.00079	-0.00105	-0.00332
<b>Mean</b>	<b>0.00093</b>	<b>-0.00155</b>	<b>-0.00287</b>
%RSD	20.96994	44.95983	22.06045

Method : Paragon File : 111010A  
SampleId1 : 1110025-1 10X SampleId2 :  
Analysis commenced : 10/10/2011 17:20:39  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:00

[SAMPLE]

Position : TUBE99

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00019	0.03019	0.00256	0.00454	0.00135	0.00020	-0.00257	4.98148	-0.00005
#2	-0.00059	0.02856	-0.00009	0.00488	0.00131	0.00018	-0.00630	4.97781	-0.00027
<b>Mean</b>	<b>-0.00020</b>	<b>0.02937</b>	<b>0.00123</b>	<b>0.00471</b>	<b>0.00133</b>	<b>0.00019</b>	<b>-0.00444</b>	<b>4.97965</b>	<b>-0.00016</b>
%RSD	275.78278	3.93732	151.67312	5.17111	1.86481	5.48061	59.49042	0.05208	98.40318

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00071	0.00027	-0.00246	0.00370	46.87797	0.00817	0.63976	-0.00001	-0.00225
#2	-0.00101	-0.00016	-0.00264	0.00713	46.92623	0.00813	0.63235	-0.00001	-0.00191
<b>Mean</b>	<b>-0.00086</b>	<b>0.00005</b>	<b>-0.00255</b>	<b>0.00542</b>	<b>46.90210</b>	<b>0.00815</b>	<b>0.63605</b>	<b>-0.00001</b>	<b>-0.00208</b>
%RSD	25.02127	565.77192	4.76971	44.71629	0.07276	0.30078	0.82427	0.00000	11.51518

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	5.40911	-0.00036	19.88495	0.00165	-0.00147	3.05711	-0.00126	0.00003	-0.00303
#2	5.42024	-0.00030	19.91447	-0.00051	-0.00228	3.04834	0.00030	0.00844	-0.00027
<b>Mean</b>	<b>5.41468</b>	<b>-0.00033</b>	<b>19.89971</b>	<b>0.00057</b>	<b>-0.00188</b>	<b>3.05272</b>	<b>-0.00048</b>	<b>0.00423</b>	<b>-0.00165</b>
%RSD	0.14539	12.90557	0.10487	266.15877	30.60881	0.20319	231.14288	140.40706	118.48067

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	1.47126	-0.00336	0.03192	-0.00337	-0.00195	0.00243	-0.01695	0.00048	0.00030
#2	1.47438	-0.00658	0.03204	-0.00364	-0.00173	0.00025	-0.01579	0.00020	0.00088
<b>Mean</b>	<b>1.47282</b>	<b>-0.00497</b>	<b>0.03198</b>	<b>-0.00350</b>	<b>-0.00184</b>	<b>0.00134</b>	<b>-0.01637</b>	<b>0.00034</b>	<b>0.00059</b>
%RSD	0.14945	45.79446	0.27642	5.45239	8.24869	115.38320	4.97474	58.92441	69.16384

	Zr ppm	Pb calc	Se calc
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#1	0.00095	-0.00043	-0.00201	UNDGREEN
#2	0.00078	-0.00169	0.00263	
Mean	0.00087	-0.00106	0.00031	
%RSD	13.80236	83.92594	1057.00089	

Method : Paragon File : 111010A  
SampleId1 : 1110025-1D 10X SampleId2 :  
Analysis commenced : 10/10/2011 17:23:22  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:00

[SAMPLE]

Position : TUBE100

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00035	0.02064	0.00048	0.00454	0.00117	0.00017	-0.00111	5.02942	-0.00084
#2	0.00005	0.02462	0.00331	0.00468	0.00117	0.00017	-0.00030	5.01973	-0.00035
Mean	-0.00015	0.02263	0.00190	0.00461	0.00117	0.00017	-0.00071	5.02458	-0.00059
%RSD	187.70683	12.45484	105.78241	2.11484	0.00000	1.73842	81.28432	0.13642	59.05503

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00053	-0.00005	-0.00332	0.00111	46.58650	0.00813	0.64223	-0.00009	-0.00225
#2	-0.00077	-0.00029	-0.00272	0.00225	46.78657	0.00815	0.64141	-0.00009	-0.00273
Mean	-0.00065	-0.00017	-0.00302	0.00168	46.68654	0.00814	0.64182	-0.00009	-0.00249
%RSD	26.46122	97.13724	14.15431	48.05959	0.30301	0.15055	0.09076	0.00000	13.48583

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	5.36209	0.00018	19.85134	-0.00363	-0.00214	3.06296	0.00052	0.00676	0.00097
#2	5.39823	-0.00154	19.89573	-0.00056	-0.00154	3.04541	-0.00204	0.00429	-0.00390
Mean	5.38016	-0.00068	19.87354	-0.00210	-0.00184	3.05419	-0.00076	0.00552	-0.00147
%RSD	0.47503	178.63898	0.15795	103.38908	23.28358	0.40619	238.86105	31.65382	234.58909

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	1.46761	-0.00443	0.03186	-0.00238	-0.00154	0.00452	-0.01521	0.00044	0.00263
#2	1.47395	-0.00229	0.03202	-0.00288	-0.00182	0.00252	-0.02214	0.00023	0.00147
Mean	1.47078	-0.00336	0.03194	-0.00263	-0.00168	0.00352	-0.01868	0.00034	0.00205
%RSD	0.30496	45.14924	0.34067	13.24534	11.85010	40.30805	26.21957	44.34621	40.14978

	Zr ppm	Pb calc	Se calc
#1	0.00065	-0.00264	0.00289
#2	0.00062	-0.00121	-0.00117
Mean	0.00063	-0.00193	0.00086
%RSD	3.11332	52.33587	334.65646

Method : Paragon File : 111010A  
SampleId1 : CCV SampleId2 :  
Analysis commenced : 10/10/2011 17:25:09

Printed : 10/11/2011 11:38:00

[CV]

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19517	51.97860	0.50550	0.99401	0.96319	0.48024	0.52812	51.48826	0.50420
#2	0.19532	52.07283	0.51120	0.99816	0.96483	0.48047	0.52439	51.52742	0.50269
Mean	0.19524	52.02572	0.50835	0.99608	0.96401	0.48035	0.52626	51.50784	0.50344
%RSD	0.05324	0.12807	0.79353	0.29467	0.11993	0.03366	0.50158	0.05376	0.21271

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.48337	0.96004	1.01856	20.01483	48.08563	0.48325	51.12036	0.95154	0.97797
#2	0.48343	0.96137	1.01925	20.02260	48.15230	0.48374	51.16220	0.95210	0.97811
Mean	0.48340	0.96071	1.01891	20.01871	48.11896	0.48349	51.14128	0.95182	0.97804
%RSD	0.00886	0.09798	0.04793	0.02745	0.09797	0.07129	0.05785	0.04116	0.00987

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	48.56960	0.99064	5.16849	0.98482	0.95596	5.19433	0.48294	1.01254	0.97832
#2	48.58452	0.98921	5.18346	0.98980	0.95782	5.20019	0.48738	1.01626	0.98596
Mean	48.57706	0.98993	5.17598	0.98731	0.95689	5.19726	0.48516	1.01440	0.98214
%RSD	0.02172	0.10230	0.20454	0.35704	0.13731	0.07976	0.64712	0.25969	0.55021

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.81901	1.06159	0.48309	0.34892	0.46047	0.51886	4.72425	0.47729	0.98839
#2	4.82398	1.05227	0.48378	0.34636	0.46166	0.52459	4.71788	0.47942	0.99190
Mean	4.82149	1.05693	0.48343	0.34764	0.46106	0.52172	4.72107	0.47835	0.99015
%RSD	0.07296	0.62391	0.10111	0.52022	0.18284	0.77609	0.09541	0.31420	0.25067

	Zr ppm	Pb calc	Se calc
#1	0.98576	0.96557	0.98971
#2	0.98705	0.96847	0.99605
Mean	0.98640	0.96702	0.99288
%RSD	0.09266	0.21202	0.45137

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:00

SampleId1 : CCB

SampleId2 :

[CB]

Analysis commenced : 10/10/2011 17:27:10

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00009	0.05744	-0.00018	-0.00228	-0.00037	0.00051	-0.00679	0.00588	-0.00027
#2	-0.00059	0.06678	-0.00226	-0.00228	-0.00034	0.00054	-0.00176	0.01082	-0.00048

<b>Mean</b>	<b>-0.00025</b>	<b>0.06211</b>	<b>-0.00122</b>	<b>-0.00228</b>	<b>-0.00035</b>	<b>0.00052</b>	<b>-0.00427</b>	<b>0.00835</b>	<b>-0.00037</b>
<b>%RSD</b>	191.62417	10.64133	120.16046	0.00000	7.01406	4.83217	83.21039	41.83767	39.43844
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00053	-0.00014	-0.00255	0.01170	-0.04451	0.00383	-0.00931	-0.00001	-0.00117
#2	-0.00041	-0.00037	-0.00237	0.01336	-0.04948	0.00385	-0.00972	0.00014	-0.00130
<b>Mean</b>	<b>-0.00047</b>	<b>-0.00026</b>	<b>-0.00246</b>	<b>0.01253</b>	<b>-0.04699</b>	<b>0.00384</b>	<b>-0.00951</b>	<b>0.00006</b>	<b>-0.00123</b>
<b>%RSD</b>	18.33904	65.88657	5.11825	9.37509	7.47623	0.37256	3.06109	170.08111	7.76908
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.05664	-0.00205	-0.00660	-0.00206	-0.00062	-0.02521	-0.00180	-0.00389	-0.00346
#2	-0.05429	-0.00166	0.00723	-0.00255	-0.00058	-0.01939	-0.00136	-0.00423	-0.00077
<b>Mean</b>	<b>-0.05546</b>	<b>-0.00186</b>	<b>0.00032</b>	<b>-0.00231</b>	<b>-0.00060</b>	<b>-0.02230</b>	<b>-0.00158</b>	<b>-0.00406</b>	<b>-0.00212</b>
<b>%RSD</b>	2.99524	14.71762	3093.41386	14.96111	5.21256	18.47881	19.96374	5.98559	89.72447
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.02064	0.00021	-0.00286	-0.00166	-0.00156	0.00380	-0.01349	-0.00030	-0.00144
#2	-0.01988	-0.00014	-0.00283	0.00080	-0.00148	0.00307	-0.02272	-0.00037	0.00001
<b>Mean</b>	<b>-0.02026</b>	<b>0.00004</b>	<b>-0.00284</b>	<b>-0.00043</b>	<b>-0.00152</b>	<b>0.00343</b>	<b>-0.01811</b>	<b>-0.00033</b>	<b>-0.00071</b>
<b>%RSD</b>	2.66314	699.07355	0.71670	407.27022	3.84546	15.09156	36.05966	15.00280	143.99794
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00142	-0.00110	-0.00361						
#2	0.00095	-0.00124	-0.00193						
<b>Mean</b>	<b>0.00119</b>	<b>-0.00117</b>	<b>-0.00277</b>						
<b>%RSD</b>	28.08179	8.03995	42.91742						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:01

SampleId1 : 1110025-1L 50X

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 17:29:07

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE101

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00039	0.05608	0.00057	-0.00104	-0.00002	0.00049	-0.00387	1.03946	-0.00009
#2	0.00013	0.06983	0.00067	-0.00104	0.00015	0.00052	-0.00370	1.04467	0.00000
<b>Mean</b>	<b>0.00026</b>	<b>0.06296</b>	<b>0.00062</b>	<b>-0.00104</b>	<b>0.00007</b>	<b>0.00050</b>	<b>-0.00378</b>	<b>1.04206</b>	<b>-0.00004</b>
<b>%RSD</b>	69.90307	15.44487	10.78945	0.00000	184.26209	4.79398	3.12995	0.35343	137.32104
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00053	0.00000	-0.00281	0.00101	8.35874	0.00452	0.11505	-0.00017	-0.00096
#2	0.00044	0.00002	-0.00222	0.00370	8.31107	0.00459	0.12782	-0.00001	-0.00178
<b>Mean</b>	<b>-0.00004</b>	<b>0.00001</b>	<b>-0.00251</b>	<b>0.00235</b>	<b>8.33491</b>	<b>0.00455</b>	<b>0.12144</b>	<b>-0.00009</b>	<b>-0.00137</b>

%RSD	1634.79531	136.21710	16.55451	81.04594	0.40435	1.12199	7.43336	121.02741	41.99989
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.85836	-0.00050	3.99676	-0.00267	-0.00020	0.60436	-0.00069	0.00070	-0.00150
#2	0.85754	-0.00077	3.97622	0.00162	-0.00169	0.62478	-0.00025	0.00307	-0.00078
<b>Mean</b>	<b>0.85795</b>	<b>-0.00064</b>	<b>3.98649</b>	<b>-0.00052</b>	<b>-0.00094</b>	<b>0.61457</b>	<b>-0.00047</b>	<b>0.00189</b>	<b>-0.00114</b>
%RSD	0.06793	29.65750	0.36427	582.71070	111.91499	2.34839	65.57007	88.67947	45.07596
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.28179	-0.00086	0.00419	0.00195	-0.00157	-0.00176	-0.01694	0.00002	0.00088
#2	0.28369	0.00236	0.00423	0.00081	-0.00156	0.00289	-0.00310	0.00013	0.00059
<b>Mean</b>	<b>0.28274</b>	<b>0.00075</b>	<b>0.00421</b>	<b>0.00138</b>	<b>-0.00157</b>	<b>0.00057</b>	<b>-0.01002</b>	<b>0.00007</b>	<b>0.00074</b>
%RSD	0.47632	302.85260	0.64502	58.79784	0.37338	580.80781	97.70613	103.44508	27.78714
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00087	-0.00102	-0.00077						
#2	0.00128	-0.00059	0.00050						
<b>Mean</b>	<b>0.00107</b>	<b>-0.00080</b>	<b>-0.00013</b>						
%RSD	27.02075	37.99886	677.77305						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:01

SampleId1 : 1110025-1MS 10X

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 17:30:59

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE102

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00010	0.05104	-0.00122	0.00564	0.00142	0.00044	-0.00419	5.04436	-0.00016
#2	-0.00054	0.05819	-0.00643	0.00557	0.00152	0.00049	-0.00046	5.01737	-0.00023
<b>Mean</b>	<b>-0.00032</b>	<b>0.05461</b>	<b>-0.00382</b>	<b>0.00561</b>	<b>0.00147</b>	<b>0.00046</b>	<b>-0.00233</b>	<b>5.03086</b>	<b>-0.00019</b>
%RSD	96.65531	9.25511	96.15330	0.86900	5.06061	7.56126	113.46007	0.37929	24.59508
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00065	0.00003	-0.00263	0.00370	47.45688	0.00826	0.65212	-0.00001	-0.00191
#2	-0.00071	-0.00043	-0.00263	0.00453	47.34613	0.00828	0.65171	0.00006	-0.00076
<b>Mean</b>	<b>-0.00068</b>	<b>-0.00020</b>	<b>-0.00263</b>	<b>0.00412</b>	<b>47.40151</b>	<b>0.00827</b>	<b>0.65191</b>	<b>0.00003</b>	<b>-0.00134</b>
%RSD	6.37664	161.02113	0.03608	14.25479	0.16521	0.19758	0.04468	213.30939	61.00979
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	5.50302	-0.00107	20.95857	-0.00206	-0.00249	3.08050	-0.00159	0.00104	-0.00136
#2	5.49244	-0.00178	20.89564	-0.00397	-0.00108	3.06881	-0.00057	-0.00333	-0.00107
<b>Mean</b>	<b>5.49773</b>	<b>-0.00143</b>	<b>20.92710</b>	<b>-0.00302</b>	<b>-0.00179</b>	<b>3.07465</b>	<b>-0.00108</b>	<b>-0.00115</b>	<b>-0.00121</b>
%RSD	0.13609	35.38609	0.21263	44.62863	55.90860	0.26900	66.40815	269.45304	16.95726

ted: 10/11/2011 11:38:22 User: MIKE LUNDGREEN

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.48920	-0.00086	0.03284	-0.00199	-0.00184	0.00288	-0.01810	0.00023	0.00379
#2	1.47900	-0.00372	0.03274	0.00131	-0.00160	0.00498	-0.01637	-0.00016	0.00553
Mean	1.48410	-0.00229	0.03279	-0.00034	-0.00172	0.00393	-0.01723	0.00004	0.00466
%RSD	0.48587	88.42213	0.22813	688.22074	9.84067	37.69137	7.09979	726.29215	26.44297

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00088	-0.00235	-0.00056
#2	0.00034	-0.00204	-0.00182
Mean	0.00061	-0.00220	-0.00119
%RSD	63.17854	9.91725	74.90274

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:01

SampleId1 : 1110025-1MSD 10X

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 17:32:51

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE103

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00068	0.04967	0.00105	0.00475	0.00128	0.00045	-0.00339	5.13423	-0.00055
#2	0.00019	0.04722	-0.00283	0.00440	0.00131	0.00042	-0.00338	5.14262	-0.00070
Mean	-0.00024	0.04844	-0.00089	0.00457	0.00129	0.00043	-0.00338	5.13842	-0.00063
%RSD	253.98675	3.57828	306.91304	5.32693	1.91532	5.25400	0.02128	0.11539	16.39619

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00113	-0.00064	-0.00331	-0.00003	47.66087	0.00825	0.64800	-0.00025	-0.00245
#2	-0.00083	-0.00046	-0.00323	0.00038	47.28150	0.00825	0.64841	-0.00009	-0.00191
Mean	-0.00098	-0.00055	-0.00327	0.00017	47.47118	0.00825	0.64821	-0.00017	-0.00218
%RSD	21.88380	24.11138	1.80953	167.90535	0.56509	0.07429	0.04493	65.21595	17.56609

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	5.52592	-0.00232	21.38124	-0.00199	0.00062	3.15946	-0.00225	-0.00255	0.00104
#2	5.47251	-0.00018	21.24353	-0.00166	-0.00231	3.09805	-0.00325	-0.00098	-0.00281
Mean	5.49921	-0.00125	21.31238	-0.00182	-0.00085	3.12875	-0.00275	-0.00177	-0.00089
%RSD	0.68684	121.33910	0.45691	12.88494	244.54681	1.38790	25.63979	62.89182	307.24101

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.50649	-0.00300	0.03309	-0.00079	-0.00209	0.00343	-0.02271	-0.00055	0.00088
#2	1.49639	0.00022	0.03298	0.00023	-0.00199	0.00725	-0.02041	0.00016	0.00059
Mean	1.50144	-0.00139	0.03303	-0.00028	-0.00204	0.00534	-0.02156	-0.00019	0.00074
%RSD	0.47537	163.29296	0.24703	253.74934	3.43699	50.66174	7.56893	259.46316	27.78714

	Zr	Pb	SeUNDGREEN
	ppm	calc	calc
#1	0.00026	-0.00025	-0.00016
#2	0.00060	-0.00209	-0.00220
<b>Mean</b>	<b>0.00043</b>	<b>-0.00117</b>	<b>-0.00118</b>
%RSD	56.54231	111.31733	122.64338

Method : Paragon File : 111010A  
SampleId1 : 1110025-2 5X SampleId2 :  
Analysis commenced : 10/10/2011 17:34:43  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:01

[SAMPLE]

Position : TUBE104

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00059	0.05300	0.00190	0.01336	0.00352	0.00046	-0.00517	10.08352	-0.00082
#2	-0.00030	0.05278	-0.00028	0.01405	0.00359	0.00046	0.00019	10.10807	-0.00051
<b>Mean</b>	<b>-0.00044</b>	<b>0.05289</b>	<b>0.00081</b>	<b>0.01371</b>	<b>0.00356</b>	<b>0.00046</b>	<b>-0.00249</b>	<b>10.09579</b>	<b>-0.00066</b>
%RSD	46.06955	0.28820	190.13268	3.55569	1.39447	0.72441	152.21728	0.17195	32.70630

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00113	-0.00024	-0.00289	0.01793	102.03873	0.01392	1.30965	0.00053	-0.00266
#2	-0.00046	0.00038	-0.00229	0.01772	102.17695	0.01391	1.31995	0.00069	-0.00117
<b>Mean</b>	<b>-0.00079</b>	<b>0.00007</b>	<b>-0.00259</b>	<b>0.01782</b>	<b>102.10784</b>	<b>0.01391</b>	<b>1.31480</b>	<b>0.00061</b>	<b>-0.00191</b>
%RSD	59.35422	632.67702	16.18682	0.82379	0.09572	0.04405	0.55402	18.05812	55.15815

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	12.27513	0.00089	21.70819	-0.00075	0.00178	6.29427	-0.00204	-0.00009	-0.00070
#2	12.30836	-0.00086	21.94130	0.00025	0.00012	6.32949	-0.00025	0.00137	-0.00041
<b>Mean</b>	<b>12.29174</b>	<b>0.00002</b>	<b>21.82474</b>	<b>-0.00025</b>	<b>0.00095</b>	<b>6.31188</b>	<b>-0.00114</b>	<b>0.00064</b>	<b>-0.00056</b>
%RSD	0.19116	7698.85698	0.75525	283.01054	123.84268	0.39457	110.32019	160.77320	36.95680

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.01362	-0.00050	0.06796	-0.00121	-0.00181	-0.00085	-0.02273	0.00038	0.00263
#2	3.02384	-0.00407	0.06814	-0.00271	-0.00175	-0.00102	-0.01522	0.00062	0.00379
<b>Mean</b>	<b>3.01873</b>	<b>-0.00229</b>	<b>0.06805</b>	<b>-0.00196</b>	<b>-0.00178</b>	<b>-0.00093</b>	<b>-0.01897</b>	<b>0.00050</b>	<b>0.00321</b>
%RSD	0.23938	110.52230	0.18006	53.82511	2.29813	13.45906	27.95359	34.98541	25.60910

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00023	0.00094	-0.00050
#2	0.00041	0.00016	0.00018
<b>Mean</b>	<b>0.00032</b>	<b>0.00055</b>	<b>-0.00016</b>
%RSD	41.31187	99.96333	307.84143

Method : Paragon File : 111010A

Printed : 10/11/2011 11:38:01

SampleId1 : 1110025-3 5X      SampleId2 :  
 Analysis commenced : 10/10/2011 17:36:35  
 Dilution ratio : 1.00000 to 1.00000      Tray :

[SAMPLE]  
 Position : TUBE105

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00000	0.04827	0.00398	0.01309	0.00759	0.00039	0.00035	18.91968	-0.00014
#2	-0.00044	0.04799	-0.00330	0.01309	0.00748	0.00035	-0.00322	19.00552	-0.00035
Mean	-0.00022	0.04813	0.00034	0.01309	0.00754	0.00037	-0.00143	18.96260	-0.00025
%RSD	138.94041	0.42270	1531.80125	0.00000	0.98709	8.30880	176.18205	0.32011	59.21075

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00058	0.00019	-0.00247	0.02706	51.31090	0.01323	2.13230	0.00147	-0.00191
#2	-0.00052	-0.00019	-0.00254	0.02696	51.27876	0.01324	2.13271	0.00155	-0.00232
Mean	-0.00055	0.00000	-0.00251	0.02701	51.29483	0.01324	2.13251	0.00151	-0.00212
%RSD	7.85402	38058.66289	2.18614	0.27180	0.04431	0.04630	0.01367	3.65784	13.59679

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	10.98098	-0.00044	26.46168	-0.00061	-0.00133	6.30894	0.00074	0.00205	-0.00164
#2	10.96012	-0.00030	26.55671	-0.00107	0.00072	6.32362	0.00008	-0.00435	-0.00281
Mean	10.97055	-0.00037	26.50920	-0.00084	-0.00030	6.31628	0.00041	-0.00115	-0.00222
%RSD	0.13449	28.37924	0.25348	39.32510	477.16276	0.16429	114.61891	393.45012	36.93929

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.03233	-0.00372	0.12998	0.00286	-0.00181	0.00453	-0.01235	0.00041	0.00001
#2	3.04096	-0.00157	0.13025	-0.00402	-0.00190	0.00325	-0.02273	0.00027	-0.00028
Mean	3.03664	-0.00264	0.13012	-0.00058	-0.00185	0.00389	-0.01754	0.00034	-0.00013
%RSD	0.20084	57.35317	0.14673	840.77347	3.46650	23.24582	41.87354	29.17464	155.31687

	Zr ppm	Pb calc	Se calc
#1	-0.00015	-0.00109	-0.00041
#2	0.00024	0.00012	-0.00332
Mean	0.00004	-0.00048	-0.00187
%RSD	666.86016	177.95172	110.04418

Method : Paragon      File : 111010A  
 SampleId1 : 1110025-4 5X      SampleId2 :  
 Analysis commenced : 10/10/2011 17:38:28  
 Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:38:01  
 [SAMPLE]  
 Position : TUBE106

Final concentrations

Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
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#1	-0.00034	0.05471	0.00180	0.01343	0.00356	0.00037	-0.00241	10.86614	-0.00056
#2	-0.00078	0.05225	-0.00094	0.01350	0.00359	0.00033	-0.00614	10.83310	-0.00033
<b>Mean</b>	<b>-0.00056</b>	<b>0.05348</b>	<b>0.00043</b>	<b>0.01347</b>	<b>0.00357</b>	<b>0.00035</b>	<b>-0.00427</b>	<b>10.84962</b>	<b>-0.00045</b>
%RSD	55.45505	3.24499	450.30671	0.36194	0.69381	7.76606	61.74758	0.21530	35.64067

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00107	0.00049	-0.00220	0.01907	98.58639	0.01381	1.34756	-0.00001	-0.00062
#2	-0.00076	0.00073	-0.00246	0.01907	97.75137	0.01373	1.34427	0.00006	-0.00117
<b>Mean</b>	<b>-0.00092</b>	<b>0.00061</b>	<b>-0.00233</b>	<b>0.01907</b>	<b>98.16888</b>	<b>0.01377</b>	<b>1.34591</b>	<b>0.00003</b>	<b>-0.00090</b>
%RSD	23.39697	28.08094	7.81948	0.00000	0.60146	0.40053	0.17319	213.30939	42.84504

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	12.12865	-0.00047	42.36821	-0.00156	-0.00143	6.55846	-0.00114	-0.00670	-0.00310
#2	11.99727	-0.00030	42.26857	-0.00063	-0.00016	6.52617	-0.00070	-0.00076	-0.00448
<b>Mean</b>	<b>12.06296</b>	<b>-0.00039</b>	<b>42.31839</b>	<b>-0.00109</b>	<b>-0.00080</b>	<b>6.54231</b>	<b>-0.00092</b>	<b>-0.00373</b>	<b>-0.00379</b>
%RSD	0.77009	32.74105	0.16650	60.36873	112.84034	0.34905	33.67817	112.67612	25.76444

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.05366	-0.00014	0.07059	-0.00097	-0.00191	0.00525	-0.02100	0.00062	0.00147
#2	3.03234	0.00057	0.07023	0.00075	-0.00179	0.00189	-0.01926	0.00055	0.00234
<b>Mean</b>	<b>3.04300</b>	<b>0.00022</b>	<b>0.07041</b>	<b>-0.00011</b>	<b>-0.00185</b>	<b>0.00357</b>	<b>-0.02013</b>	<b>0.00059</b>	<b>0.00190</b>
%RSD	0.49534	234.77643	0.35772	1075.99590	4.42176	66.67077	6.08062	8.49247	32.41283

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00018	-0.00147	-0.00430
#2	-0.00002	-0.00032	-0.00324
<b>Mean</b>	<b>0.00008</b>	<b>-0.00089</b>	<b>-0.00377</b>
%RSD	175.06289	91.49544	19.84540

Method : Paragon File : 111010A  
SampleId1 : 1110025-5 5X SampleId2 :  
Analysis commenced : 10/10/2011 17:40:21  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:02  
[SAMPLE]

Position : TUBE107

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00064	0.03396	0.00190	0.01323	0.00257	0.00033	-0.00549	9.16840	-0.00040
#2	-0.00025	0.03560	0.00369	0.01281	0.00268	0.00029	-0.00143	9.16233	-0.00030
<b>Mean</b>	<b>-0.00044</b>	<b>0.03478</b>	<b>0.00279</b>	<b>0.01302</b>	<b>0.00263</b>	<b>0.00031</b>	<b>-0.00346</b>	<b>9.16536</b>	<b>-0.00035</b>
%RSD	62.62952	3.33172	45.46032	2.24637	2.83155	9.28745	82.86880	0.04678	21.75216

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00089	-0.00027	-0.00289	0.00235	45.11702	0.01280	1.26639	-0.00033	-0.00090



#2	-0.00058	-0.00032	-0.00229	0.00287	45.28697	0.01284	1.26886	-0.00025	-0.00212
Mean	-0.00073	-0.00030	-0.00259	0.00261	45.20199	0.01282	1.26762	-0.00029	-0.00151
%RSD	29.18577	12.72594	16.36041	14.03866	0.26586	0.22305	0.13791	19.27502	57.32494

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	10.49879	-0.00003	20.94077	-0.00408	0.00149	6.49681	-0.00425	0.00283	-0.00274
#2	10.54131	-0.00074	21.05790	-0.00313	0.00012	6.54085	-0.00181	-0.00131	-0.00056
Mean	10.52005	-0.00039	20.99933	-0.00360	0.00081	6.51883	-0.00303	0.00076	-0.00165
%RSD	0.28579	130.96426	0.39440	18.62444	120.67120	0.47767	56.90771	386.41988	93.48778

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.02847	-0.00121	0.05914	-0.00095	-0.00195	-0.00076	-0.01637	0.00030	0.00176
#2	3.04246	0.00093	0.05950	-0.00410	-0.00195	0.00498	-0.01752	0.00055	0.00030
Mean	3.03546	-0.00014	0.05932	-0.00252	-0.00195	0.00211	-0.01695	0.00043	0.00103
%RSD	0.32588	1067.54616	0.43596	88.06161	0.00000	192.20904	4.81711	41.05186	99.74066

	Zr ppm	Pb calc	Se calc
#1	0.00025	-0.00036	-0.00088
#2	0.00029	-0.00096	-0.00081
Mean	0.00027	-0.00066	-0.00085
%RSD	9.28875	64.25763	6.06808

Method : Paragon File : 111010A  
SampleId1 : 1110025-6 5X SampleId2 :  
Analysis commenced : 10/10/2011 17:42:15  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:02  
[SAMPLE]  
Position : TUBE108

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00010	0.03569	0.00350	0.01391	0.00345	0.00027	-0.00484	10.63123	-0.00052
#2	-0.00044	0.03597	0.00105	0.01281	0.00342	0.00024	-0.00241	10.63810	-0.00086
Mean	-0.00027	0.03583	0.00227	0.01336	0.00343	0.00026	-0.00362	10.63466	-0.00069
%RSD	88.23008	0.54471	76.43285	5.83582	0.72215	9.99162	47.45608	0.04567	35.19781

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00064	0.00075	-0.00187	0.00059	87.94615	0.01359	1.34591	-0.00025	-0.00035
#2	-0.00101	0.00022	-0.00220	0.00080	87.89912	0.01361	1.33396	-0.00025	-0.00259
Mean	-0.00082	0.00049	-0.00204	0.00069	87.92264	0.01360	1.33994	-0.00025	-0.00147
%RSD	31.20554	78.12891	11.74288	21.15655	0.03782	0.10514	0.63062	0.00000	107.51718

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	11.77870	-0.00169	21.06693	0.00053	0.00139	6.46745	-0.00147	0.00015	-0.00252
#2	11.76971	-0.00095	21.08964	-0.00169	-0.00059	6.49387	-0.00382	-0.00468	0.00017

<b>Mean</b>	<b>11.77420</b>	<b>-0.00132</b>	<b>21.07828</b>	<b>-0.00058</b>	<b>0.00040</b>	<b>6.48066</b>	<b>-0.00265</b>	<b>-0.00227</b>	<b>-0.00118</b>
<b>%RSD</b>	0.05398	39.76239	0.07619	269.00692	348.47239	0.28828	62.75930	150.47730	161.53267
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.01103	-0.00086	0.07001	-0.00324	-0.00201	0.00070	-0.01406	0.00048	0.00147
#2	3.01738	-0.00014	0.07017	-0.00747	-0.00198	-0.00012	-0.01925	0.00076	0.00176
<b>Mean</b>	<b>3.01420</b>	<b>-0.00050</b>	<b>0.07009</b>	<b>-0.00536</b>	<b>-0.00200</b>	<b>0.00029</b>	<b>-0.01666</b>	<b>0.00062</b>	<b>0.00161</b>
<b>%RSD</b>	0.14894	101.20799	0.15540	55.78456	0.87883	201.77298	22.04806	32.23435	12.75283
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00030	0.00110	-0.00163						
#2	0.00043	-0.00095	-0.00145						
<b>Mean</b>	<b>0.00036</b>	<b>0.00007</b>	<b>-0.00154</b>						
<b>%RSD</b>	25.22924	1994.73280	8.58581						

Method : Paragon File : 111010A  
SampleId1 : 1110025-7 5X SampleId2 :  
Analysis commenced : 10/10/2011 17:44:06  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:02

[SAMPLE]

Position : TUBE109

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00009	0.03123	0.00464	0.01447	0.00356	0.00028	-0.00451	10.95891	-0.00049
#2	0.00043	0.03607	0.00180	0.01398	0.00359	0.00024	0.00020	10.94014	-0.00037
<b>Mean</b>	<b>0.00026</b>	<b>0.03365</b>	<b>0.00322</b>	<b>0.01422</b>	<b>0.00357</b>	<b>0.00026</b>	<b>-0.00216</b>	<b>10.94952</b>	<b>-0.00043</b>
<b>%RSD</b>	91.68069	10.17994	62.29424	2.39853	0.69381	12.18328	154.27115	0.12119	20.09871
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00046	0.00110	-0.00238	-0.00097	88.93805	0.01377	1.36940	-0.00001	-0.00090
#2	-0.00016	0.00107	-0.00145	-0.00003	88.16091	0.01369	1.37187	0.00006	-0.00049
<b>Mean</b>	<b>-0.00031</b>	<b>0.00109</b>	<b>-0.00192</b>	<b>-0.00050</b>	<b>88.54948</b>	<b>0.01373</b>	<b>1.37064</b>	<b>0.00003</b>	<b>-0.00069</b>
<b>%RSD</b>	69.32650	2.07597	34.44436	132.15673	0.62057	0.38679	0.12755	213.30939	41.58212
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	11.97975	0.00074	42.73402	0.00068	0.00096	6.67591	0.00186	0.00553	-0.00165
#2	11.84633	0.00063	42.55232	0.00062	-0.00081	6.59076	0.00008	-0.00018	-0.00078
<b>Mean</b>	<b>11.91304</b>	<b>0.00068</b>	<b>42.64317</b>	<b>0.00065</b>	<b>0.00007</b>	<b>6.63333</b>	<b>0.00097</b>	<b>0.00267</b>	<b>-0.00121</b>
<b>%RSD</b>	0.79194	12.27520	0.30128	6.29385	1725.41401	0.90768	129.66341	150.93017	50.80282
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.09551	-0.00229	0.07131	-0.00017	-0.00164	0.00571	-0.00944	0.00076	0.00088
#2	3.07236	-0.00479	0.07098	-0.00365	-0.00179	0.00071	-0.00021	0.00122	0.00030
<b>Mean</b>	<b>3.08394</b>	<b>-0.00354</b>	<b>0.07115</b>	<b>-0.00191</b>	<b>-0.00172</b>	<b>0.00321</b>	<b>-0.00483</b>	<b>0.00099</b>	<b>0.00059</b>

%RSD	0.53092	50.00295	0.32532	128.61492	6.12269	110.25597	135.26894	32.79017	69.16384
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00018	0.00087	0.00074						
#2	0.00066	-0.00034	-0.00058						
<b>Mean</b>	<b>0.00042</b>	<b>0.00027</b>	<b>0.00008</b>						
%RSD	81.15194	319.64686	1149.72424						

Method : Paragon File : 111010A  
SampleId1 : 1110025-8 5X SampleId2 :  
Analysis commenced : 10/10/2011 17:45:58  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:02  
[SAMPLE]  
Position : TUBE110

# Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00030	0.03320	0.00303	0.01343	-0.00090	0.00028	-0.00176	0.20846	-0.00019
#2	0.00053	0.03621	-0.00028	0.01350	-0.00086	0.00026	0.00133	0.21002	-0.00022
<b>Mean</b>	<b>0.00012</b>	<b>0.03470</b>	<b>0.00138</b>	<b>0.01347</b>	<b>-0.00088</b>	<b>0.00027</b>	<b>-0.00022</b>	<b>0.20924</b>	<b>-0.00020</b>
%RSD	500.01474	6.13628	170.05049	0.36194	2.81925	5.23328	1012.64565	0.52737	10.01118

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00071	-0.00027	-0.00247	-0.00813	97.06242	0.01346	0.21430	-0.00048	-0.00212
#2	0.00002	0.00064	-0.00247	-0.00699	96.45509	0.01343	0.22007	-0.00040	-0.00198
<b>Mean</b>	<b>-0.00035</b>	<b>0.00019</b>	<b>-0.00247</b>	<b>-0.00756</b>	<b>96.75875</b>	<b>0.01344</b>	<b>0.21718</b>	<b>-0.00044</b>	<b>-0.00205</b>
%RSD	148.61898	346.59500	0.07706	10.68171	0.44383	0.16714	1.87714	12.47426	4.68233

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	11.96971	-0.00080	34.38793	-0.00146	0.00079	6.25611	-0.00348	-0.00725	-0.00100
#2	11.88188	-0.00015	34.33286	0.00212	-0.00070	6.30307	0.00052	-0.00187	0.00046
<b>Mean</b>	<b>11.92579</b>	<b>-0.00047</b>	<b>34.36039</b>	<b>0.00033</b>	<b>0.00004</b>	<b>6.27959</b>	<b>-0.00148</b>	<b>-0.00456</b>	<b>-0.00027</b>
%RSD	0.52078	97.48204	0.11333	767.36356	2423.19257	0.52878	190.81514	83.46656	380.07692

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.00941	-0.00121	-0.00194	0.00047	-0.00184	0.00443	-0.01405	0.00037	0.00001
#2	2.99660	0.00057	-0.00192	-0.00054	-0.00169	0.00343	-0.01059	0.00101	-0.00086
<b>Mean</b>	<b>3.00300</b>	<b>-0.00032</b>	<b>-0.00193</b>	<b>-0.00003</b>	<b>-0.00176</b>	<b>0.00393</b>	<b>-0.01232</b>	<b>0.00069</b>	<b>-0.00042</b>
%RSD	0.30169	393.65989	0.70542	2093.66122	6.29626	17.98494	19.86271	65.27294	145.76845

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00001	0.00004	-0.00308
#2	0.00036	0.00024	-0.00032
<b>Mean</b>	<b>0.00019</b>	<b>0.00014</b>	<b>-0.00170</b>
%RSD	130.48577	101.89853	114.95643

ted: 10/11/2011 11:38:22 User: MIKE LUNDGREEN  
 Method : Paragon File : 111010A  
 SampleId1 : CCV SampleId2 :  
 Analysis commenced : 10/10/2011 17:47:50  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:02  
 [CV]  
 Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19548	52.43583	0.51358	0.99961	0.97012	0.48197	0.53060	51.79934	0.50908
#2	0.19521	52.28237	0.51567	1.00286	0.96802	0.48221	0.52539	51.85502	0.50984
Mean	0.19535	52.35910	0.51463	1.00124	0.96907	0.48209	0.52799	51.82718	0.50946
%RSD	0.09748	0.20724	0.28743	0.22964	0.15303	0.03502	0.69729	0.07597	0.10644
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.48564	0.96445	1.03236	20.11145	48.41097	0.48767	51.37481	0.95400	0.98186
#2	0.48691	0.96316	1.03057	20.10667	48.26343	0.48584	51.32408	0.95542	0.98261
Mean	0.48627	0.96381	1.03146	20.10906	48.33720	0.48675	51.34944	0.95471	0.98224
%RSD	0.18505	0.09452	0.12216	0.01682	0.21584	0.26480	0.06985	0.10553	0.05406
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	48.85195	1.00085	5.19725	0.99012	0.96599	5.15916	0.48938	1.01909	0.98678
#2	48.66006	1.00258	5.21983	0.99239	0.96643	5.21485	0.49029	1.02009	0.98943
Mean	48.75600	1.00171	5.20854	0.99126	0.96621	5.18700	0.48984	1.01959	0.98811
%RSD	0.27829	0.12216	0.30656	0.16205	0.03185	0.75924	0.13140	0.06933	0.18923
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.84168	1.06590	0.48801	0.34881	0.45933	0.53645	4.73345	0.47986	0.98605
#2	4.83491	1.06805	0.48703	0.36940	0.46002	0.53753	4.71030	0.48106	0.99746
Mean	4.83830	1.06697	0.48752	0.35911	0.45968	0.53699	4.72187	0.48046	0.99176
%RSD	0.09884	0.14255	0.14264	4.05456	0.10571	0.14157	0.34655	0.17701	0.81337
	Zr ppm	Pb calc	Se calc						
#1	0.99179	0.97403	0.99754						
#2	0.98930	0.97508	0.99964						
Mean	0.99054	0.97455	0.99859						
%RSD	0.17779	0.07595	0.14846						

Method : Paragon File : 111010A  
 SampleId1 : CCB SampleId2 :  
 Analysis commenced : 10/10/2011 17:49:47  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:03  
 [CB]  
 Position : STD2

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00045	0.10085	-0.00416	-0.00215	0.00012	0.00086	-0.00273	0.03734	0.00017
#2	-0.00074	0.10115	-0.00349	-0.00187	0.00012	0.00081	-0.00241	0.03370	0.00022
Mean	-0.00060	0.10100	-0.00382	-0.00201	0.00012	0.00083	-0.00257	0.03552	0.00019
%RSD	34.40704	0.20699	12.23758	9.71013	0.00000	3.99465	8.86010	7.24660	17.24294

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00035	0.00032	-0.00178	0.02291	-0.02554	0.00400	0.01746	0.00061	-0.00015
#2	-0.00053	-0.00046	-0.00229	0.02166	-0.03706	0.00397	0.01334	0.00045	-0.00035
Mean	-0.00044	-0.00007	-0.00204	0.02229	-0.03130	0.00398	0.01540	0.00053	-0.00025
%RSD	29.40129	814.85246	17.69422	3.95280	26.02423	0.56422	18.90658	20.70147	57.28621

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.03400	-0.00009	0.00885	0.00335	0.00076	-0.01064	0.00042	0.00160	-0.00179
#2	-0.03559	-0.00143	-0.00222	-0.00392	-0.00005	-0.01939	-0.00113	-0.00132	-0.00164
Mean	-0.03480	-0.00076	0.00331	-0.00028	0.00035	-0.01501	-0.00035	0.00014	-0.00172
%RSD	3.21617	124.98858	236.17555	1806.34680	161.85970	41.16583	312.78875	1461.20528	5.97536

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01775	-0.00050	-0.00254	0.00175	-0.00117	0.00380	-0.01350	0.00006	-0.00057
#2	-0.01849	0.00021	-0.00260	0.00192	-0.00133	0.00253	-0.01811	-0.00047	-0.00028
Mean	-0.01812	-0.00014	-0.00257	0.00184	-0.00125	0.00317	-0.01580	-0.00021	-0.00042
%RSD	2.90161	353.91128	1.58614	6.50307	8.87498	28.52889	20.64897	182.02274	48.58942

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00155	0.00162	-0.00066
#2	0.00131	-0.00134	-0.00154
Mean	0.00143	0.00014	-0.00110
%RSD	12.01720	1487.39542	56.30842

Method : Paragon File : 111010A  
SampleId1 : 1110025-9 5X SampleId2 :  
Analysis commenced : 10/10/2011 17:51:41  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:03

[SAMPLE]

Position : TUBE111

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00004	0.07763	-0.00170	0.01364	0.00001	0.00061	-0.00403	1.13608	-0.00021
#2	-0.00005	0.07743	-0.00151	0.01295	0.00005	0.00063	-0.00192	1.13530	-0.00016
Mean	-0.00001	0.07753	-0.00160	0.01329	0.00003	0.00062	-0.00297	1.13569	-0.00018
%RSD	802.67421	0.18134	8.34520	3.66630	76.96384	2.53755	50.11873	0.04865	19.38425

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00065	0.00027	-0.00187	0.00235	99.48134	0.01357	0.19083	-0.00001	-0.00157
#2	-0.00022	-0.00005	-0.00229	0.00246	100.23026	0.01367	0.18794	-0.00001	-0.00076
<b>Mean</b>	<b>-0.00044</b>	<b>0.00011</b>	<b>-0.00208</b>	<b>0.00241</b>	<b>99.85580</b>	<b>0.01362</b>	<b>0.18939</b>	<b>-0.00001</b>	<b>-0.00117</b>
%RSD	68.79402	215.09700	14.33581	3.04994	0.53033	0.49493	1.07632	0.00000	49.32420

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	11.94090	-0.00083	16.05575	0.00094	-0.00049	6.20035	0.00230	0.00239	-0.00121
#2	12.06215	-0.00080	16.07464	-0.00273	0.00047	6.21503	0.00042	-0.00837	-0.00099
<b>Mean</b>	<b>12.00152</b>	<b>-0.00082</b>	<b>16.06520</b>	<b>-0.00089</b>	<b>-0.00001</b>	<b>6.20769</b>	<b>0.00136</b>	<b>-0.00299</b>	<b>-0.00110</b>
%RSD	0.71439	2.57521	0.08313	290.85940	10277.36260	0.16714	97.50298	254.51308	13.96969

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	2.93546	-0.00014	0.00464	0.00071	-0.00161	0.00143	-0.00771	0.00087	0.00234
#2	2.96357	-0.00086	0.00468	0.00298	-0.00153	-0.00139	-0.01464	0.00104	0.00263
<b>Mean</b>	<b>2.94951</b>	<b>-0.00050</b>	<b>0.00466</b>	<b>0.00185</b>	<b>-0.00157</b>	<b>0.00002</b>	<b>-0.01117</b>	<b>0.00096</b>	<b>0.00248</b>
%RSD	0.67371	101.12542	0.72898	87.13867	3.72394	10547.59393	43.81405	13.06654	8.27542

	Zr ppm	Pb calc	Se calc
#1	0.00072	-0.00001	-0.00001
#2	0.00078	-0.00059	-0.00345
<b>Mean</b>	<b>0.00075</b>	<b>-0.00030</b>	<b>-0.00173</b>
%RSD	5.52132	136.48029	140.38902

Method : Paragon File : 111010A  
SampleId1 : 1110025-10 5X SampleId2 :  
Analysis commenced : 10/10/2011 17:53:33  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:03  
[SAMPLE]

Position : TUBE112

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00024	0.05260	-0.00037	0.01343	-0.00086	0.00043	0.00197	0.48786	-0.00063
#2	-0.00064	0.06133	-0.00132	0.01385	-0.00072	0.00044	-0.00565	0.49072	-0.00018
<b>Mean</b>	<b>-0.00044</b>	<b>0.05696</b>	<b>-0.00085</b>	<b>0.01364</b>	<b>-0.00079</b>	<b>0.00043</b>	<b>-0.00184</b>	<b>0.48929</b>	<b>-0.00040</b>
%RSD	62.95205	10.84020	79.03886	2.14419	12.52549	2.22019	292.84401	0.41364	79.46984

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00077	-0.00016	-0.00297	-0.00387	49.42638	0.01274	0.45194	-0.00056	-0.00327
#2	-0.00095	-0.00032	-0.00263	-0.00273	49.47287	0.01276	0.45976	-0.00048	-0.00151
<b>Mean</b>	<b>-0.00086</b>	<b>-0.00024</b>	<b>-0.00280</b>	<b>-0.00330</b>	<b>49.44963</b>	<b>0.01275</b>	<b>0.45585</b>	<b>-0.00052</b>	<b>-0.00239</b>
%RSD	14.89385	47.63777	8.65975	24.44746	0.06648	0.09616	1.21390	10.60363	52.22463

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
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#1	10.53388	-0.00074	15.20820	-0.00281	-0.00214	6.19742	-0.00004	-0.00334	-0.00027
#2	10.55159	-0.00196	15.22199	-0.00498	-0.00093	6.21796	-0.00258	-0.00087	-0.00318
<b>Mean</b>	<b>10.54274</b>	<b>-0.00135</b>	<b>15.21509</b>	<b>-0.00389</b>	<b>-0.00153</b>	<b>6.20769</b>	<b>-0.00131</b>	<b>-0.00210</b>	<b>-0.00172</b>
%RSD	0.11879	63.77582	0.06409	39.50467	55.45896	0.23400	136.94061	82.87208	119.29545

	<b>Si</b> ppm	<b>Sn</b> ppm	<b>Sr</b> ppm	<b>Th</b> ppm	<b>Ti</b> ppm	<b>Tl</b> ppm	<b>U</b> ppm	<b>V</b> ppm	<b>Zn</b> ppm
#1	2.98079	-0.00479	0.00005	0.00155	-0.00158	0.00279	-0.02213	0.00062	0.00030
#2	2.97854	-0.00121	0.00008	-0.00095	-0.00169	-0.00131	-0.02329	0.00048	0.00059
<b>Mean</b>	<b>2.97966</b>	<b>-0.00300</b>	<b>0.00007</b>	<b>0.00030</b>	<b>-0.00163</b>	<b>0.00074</b>	<b>-0.02271</b>	<b>0.00055</b>	<b>0.00045</b>
%RSD	0.05342	84.19749	30.18650	592.56887	4.65718	392.36928	3.59542	18.18446	45.77541

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.00038	-0.00236	-0.00129
#2	0.00052	-0.00228	-0.00241
<b>Mean</b>	<b>0.00045</b>	<b>-0.00232</b>	<b>-0.00185</b>
%RSD	21.54071	2.38811	42.73557

Method : Paragon File : 111010A  
SampleId1 : 1110025-11 5X SampleId2 :  
Analysis commenced : 10/10/2011 17:55:26  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:03  
[SAMPLE]

Position : TUBE113

Final concentrations

	<b>Ag</b> ppm	<b>Al</b> ppm	<b>As</b> ppm	<b>B</b> ppm	<b>Ba</b> ppm	<b>Be</b> ppm	<b>Bi</b> ppm	<b>Ca</b> ppm	<b>Cd</b> ppm
#1	-0.00079	0.06040	-0.00075	0.01385	-0.00076	0.00050	-0.00598	0.16659	-0.00015
#2	-0.00010	0.07372	-0.00056	0.01453	-0.00072	0.00052	-0.00679	0.16659	0.00016
<b>Mean</b>	<b>-0.00045</b>	<b>0.06706</b>	<b>-0.00066</b>	<b>0.01419</b>	<b>-0.00074</b>	<b>0.00051</b>	<b>-0.00638</b>	<b>0.16659</b>	<b>0.00001</b>
%RSD	109.01533	14.04124	20.35920	3.43479	3.35418	2.06480	9.00378	0.00000	2789.14383

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	-0.00053	0.00032	-0.00230	-0.00387	96.87151	0.01328	0.30202	-0.00025	-0.00151
#2	-0.00059	0.00040	-0.00247	-0.00325	97.00305	0.01329	0.31149	-0.00025	-0.00218
<b>Mean</b>	<b>-0.00056</b>	<b>0.00036</b>	<b>-0.00238</b>	<b>-0.00356</b>	<b>96.93728</b>	<b>0.01328</b>	<b>0.30676</b>	<b>-0.00025</b>	<b>-0.00184</b>
%RSD	7.63192	15.97754	5.04002	12.36346	0.09595	0.07690	2.18348	0.00000	25.99353

	<b>Na</b> ppm	<b>Ni</b> ppm	<b>P</b> ppm	<b>Pb I</b> ppm	<b>Pb II</b> ppm	<b>S</b> ppm	<b>Sb</b> ppm	<b>Se I</b> ppm	<b>Se II</b> ppm
#1	11.83913	-0.00041	35.68458	-0.00249	0.00022	6.48800	0.00030	0.00015	-0.00136
#2	11.87599	0.00125	35.62480	-0.00261	0.00153	6.57314	-0.00215	-0.00288	-0.00281
<b>Mean</b>	<b>11.85756</b>	<b>0.00042</b>	<b>35.65469</b>	<b>-0.00255</b>	<b>0.00088</b>	<b>6.53057</b>	<b>-0.00092</b>	<b>-0.00137</b>	<b>-0.00209</b>
%RSD	0.21978	281.99927	0.11856	3.34142	105.60817	0.92185	187.62303	156.69284	49.25262

	<b>Si</b> ppm	<b>Sn</b> ppm	<b>Sr</b> ppm	<b>Th</b> ppm	<b>Ti</b> ppm	<b>Tl</b> ppm	<b>U</b> ppm	<b>V</b> ppm	<b>Zn</b> ppm
#1	3.02146	-0.00193	-0.00204	0.00279	-0.00167	0.00716	-0.01175	0.00034	0.00583

#2	3.03448	0.00022	-0.00202	0.00394	-0.00183	-0.00140	-0.01348	0.00034	0.00495
<b>Mean</b>	<b>3.02797</b>	<b>-0.00086</b>	<b>-0.00203</b>	<b>0.00336</b>	<b>-0.00175</b>	<b>0.00288</b>	<b>-0.01261</b>	<b>0.00034</b>	<b>0.00539</b>
%RSD	0.30413	176.93493	0.66873	24.02158	6.67456	209.86426	9.70661	0.02538	11.43914

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	-0.00007	-0.00068	-0.00086
#2	0.00009	0.00015	-0.00283
<b>Mean</b>	<b>0.00001</b>	<b>-0.00027</b>	<b>-0.00185</b>
%RSD	923.97261	221.37446	75.72742

Method : Paragon File : 111010A  
**SampleId1 : 1110025-12 5X** **SampleId2 :**  
**Analysis commenced : 10/10/2011 17:57:19**  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:03

[SAMPLE]

Position : TUBE114

Final concentrations

	<b>Ag</b> ppm	<b>Al</b> ppm	<b>As</b> ppm	<b>B</b> ppm	<b>Ba</b> ppm	<b>Be</b> ppm	<b>Bi</b> ppm	<b>Ca</b> ppm	<b>Cd</b> ppm
#1	-0.00098	0.05641	0.00492	0.01316	-0.00055	0.00046	-0.00452	2.92474	-0.00077
#2	-0.00064	0.05189	-0.00104	0.01205	-0.00051	0.00043	-0.00695	2.94328	-0.00011
<b>Mean</b>	<b>-0.00081</b>	<b>0.05415</b>	<b>0.00194</b>	<b>0.01260</b>	<b>-0.00053</b>	<b>0.00044</b>	<b>-0.00574</b>	<b>2.93401</b>	<b>-0.00044</b>
%RSD	29.83012	5.91241	216.73508	6.18684	4.68863	4.26386	29.99757	0.44690	106.07321

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	-0.00065	-0.00075	-0.00306	-0.00564	44.32547	0.01259	0.93224	-0.00048	-0.00130
#2	-0.00119	-0.00038	-0.00306	-0.00543	44.30968	0.01259	0.93801	-0.00048	-0.00090
<b>Mean</b>	<b>-0.00092</b>	<b>-0.00057</b>	<b>-0.00306</b>	<b>-0.00553</b>	<b>44.31758</b>	<b>0.01259</b>	<b>0.93513</b>	<b>-0.00048</b>	<b>-0.00110</b>
%RSD	41.87973	47.09448	0.04141	2.65248	0.02518	0.01623	0.43613	0.00000	26.18417

	<b>Na</b> ppm	<b>Ni</b> ppm	<b>P</b> ppm	<b>Pb I</b> ppm	<b>Pb II</b> ppm	<b>S</b> ppm	<b>Sb</b> ppm	<b>Se I</b> ppm	<b>Se II</b> ppm
#1	10.28448	-0.00143	17.08580	-0.00092	0.00154	6.36471	-0.00369	0.00440	0.00344
#2	10.29189	-0.00089	17.07644	-0.00218	0.00005	6.35884	-0.00280	0.00933	0.00031
<b>Mean</b>	<b>10.28818</b>	<b>-0.00116</b>	<b>17.08112</b>	<b>-0.00155</b>	<b>0.00079</b>	<b>6.36178</b>	<b>-0.00324</b>	<b>0.00687</b>	<b>0.00187</b>
%RSD	0.05093	32.67068	0.03877	57.60104	132.44543	0.06525	19.38272	50.80146	117.91703

	<b>Si</b> ppm	<b>Sn</b> ppm	<b>Sr</b> ppm	<b>Th</b> ppm	<b>Ti</b> ppm	<b>Tl</b> ppm	<b>U</b> ppm	<b>V</b> ppm	<b>Zn</b> ppm
#1	2.97207	-0.00157	0.01827	-0.00052	-0.00185	-0.00440	-0.01982	0.00044	0.00466
#2	2.98348	-0.00121	0.01827	-0.00162	-0.00181	0.00370	-0.01752	0.00027	0.00379
<b>Mean</b>	<b>2.97778</b>	<b>-0.00139</b>	<b>0.01827</b>	<b>-0.00107</b>	<b>-0.00183</b>	<b>-0.00035</b>	<b>-0.01867</b>	<b>0.00035</b>	<b>0.00423</b>
%RSD	0.27085	18.13863	0.00000	72.27039	1.59703	1624.88397	8.74064	35.28563	14.58500

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.00014	0.00072	0.00376
#2	0.00015	-0.00069	0.00332



Mean 0.00015 0.00001 0.00354UNDGREEN  
%RSD 4.71025 7587.76786 8.81897

Method : Paragon File : 111010A  
SampleId1 : 1110025-13 5X SampleId2 :  
Analysis commenced : 10/10/2011 17:59:12  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:03  
[SAMPLE]  
Position : TUBE115

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00073	0.04786	-0.00189	0.01247	-0.00093	0.00038	-0.00338	0.16451	-0.00033
#2	-0.00084	0.04978	-0.00056	0.01405	-0.00086	0.00035	-0.00565	0.16347	-0.00068
Mean	-0.00078	0.04882	-0.00122	0.01326	-0.00090	0.00036	-0.00452	0.16399	-0.00050
%RSD	9.45654	2.78061	76.46553	8.45440	5.52829	5.65501	35.50471	0.44858	49.50958

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00083	-0.00002	-0.00280	-0.00678	87.26428	0.01335	0.10188	-0.00033	-0.00151
#2	-0.00041	-0.00024	-0.00272	-0.00636	87.43030	0.01335	0.10888	-0.00033	-0.00103
Mean	-0.00062	-0.00013	-0.00276	-0.00657	87.34729	0.01335	0.10538	-0.00033	-0.00127
%RSD	48.54987	118.75162	2.00893	4.46708	0.13440	0.00000	4.69759	0.00000	26.46486

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	11.66839	-0.00074	14.57885	-0.00329	0.00045	6.40287	-0.00170	-0.00457	-0.00201
#2	11.70055	-0.00140	14.63359	-0.00371	-0.00002	6.39406	-0.00125	-0.00288	-0.00056
Mean	11.68447	-0.00107	14.60622	-0.00350	0.00021	6.39847	-0.00147	-0.00373	-0.00129
%RSD	0.19467	43.26228	0.26502	8.61695	154.75951	0.09732	21.69265	32.03018	79.82145

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	2.96229	0.00022	-0.00214	-0.00371	-0.00193	-0.00104	-0.02732	0.00016	0.00205
#2	2.96335	0.00236	-0.00214	-0.00145	-0.00199	-0.00067	-0.01809	0.00076	0.00118
Mean	2.96282	0.00129	-0.00214	-0.00258	-0.00196	-0.00086	-0.02271	0.00046	0.00161
%RSD	0.02540	117.77031	0.00000	61.79191	2.38805	30.49900	28.74595	92.39656	38.25849

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00021	-0.00080	-0.00287
#2	0.00025	-0.00125	-0.00133
Mean	0.00023	-0.00102	-0.00210
%RSD	12.81375	31.32964	51.57061

Method : Paragon File : 111010A  
SampleId1 : 1110025-14 5X SampleId2 :  
Analysis commenced : 10/10/2011 18:01:06  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:04  
[SAMPLE]  
Position : TUBE116

Final concentrations38:23 User: MIKE LUNDGREEN

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00020	0.04725	-0.00094	0.01309	-0.00083	0.00039	-0.00452	0.72651	-0.00042
#2	-0.00084	0.04928	0.00123	0.01385	-0.00086	0.00038	-0.00111	0.73145	-0.00054
Mean	-0.00052	0.04827	0.00015	0.01347	-0.00084	0.00038	-0.00281	0.72898	-0.00048
%RSD	86.66296	2.98504	1046.70512	3.98132	2.93632	1.38864	85.58520	0.47973	17.42797
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00077	0.00076	-0.00255	-0.00647	86.76773	0.01345	0.66654	-0.00009	-0.00239
#2	-0.00071	0.00008	-0.00280	-0.00668	87.53127	0.01353	0.66777	-0.00025	-0.00198
Mean	-0.00074	0.00042	-0.00267	-0.00657	87.14950	0.01349	0.66715	-0.00017	-0.00218
%RSD	5.80678	113.33429	6.74813	2.23354	0.61952	0.42404	0.13098	65.21595	13.17457
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	11.65886	-0.00125	35.80970	-0.00311	0.00076	6.50268	-0.00305	0.00664	0.00133
#2	11.78502	-0.00116	35.98509	-0.00296	0.00072	6.53497	-0.00393	0.00630	-0.00209
Mean	11.72194	-0.00120	35.89740	-0.00304	0.00074	6.51883	-0.00349	0.00647	-0.00038
%RSD	0.76102	5.24323	0.34548	3.62715	3.18098	0.35029	17.83556	3.68783	637.06427
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.03212	-0.00086	0.00173	-0.00162	-0.00173	-0.00122	-0.01925	0.00044	0.00088
#2	3.06280	-0.00193	0.00180	-0.00177	-0.00183	0.00006	-0.02098	0.00048	-0.00057
Mean	3.04746	-0.00139	0.00177	-0.00170	-0.00178	-0.00058	-0.02011	0.00046	0.00016
%RSD	0.71188	54.41560	2.68975	5.95168	3.61135	154.83947	6.08540	5.42817	649.03324
	Zr ppm	Pb calc	Se calc						
#1	0.00128	-0.00053	0.00310						
#2	0.00112	-0.00050	0.00071						
Mean	0.00120	-0.00052	0.00190						
%RSD	9.35892	4.05262	88.81665						

Method : Paragon File : 111010A  
SampleId1 : IP111010-2MB SampleId2 :  
Analysis commenced : 10/10/2011 18:03:00  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:04  
[SAMPLE]  
Position : TUBE117

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00005	0.03490	-0.00132	-0.00449	-0.00104	0.00029	0.00116	-0.03000	-0.00071
#2	-0.00054	0.03633	-0.00312	-0.00428	-0.00100	0.00030	-0.00290	-0.03000	-0.00047
Mean	-0.00030	0.03561	-0.00222	-0.00439	-0.00102	0.00029	-0.00087	-0.03000	-0.00059
%RSD	115.34261	2.84093	57.30073	3.33389	2.43147	2.61913	330.99496	0.00000	28.17756

ted: 10/11/2011 11:38:23 User: MIKE LUNDGREEN

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00041	-0.00081	-0.00289	-0.01031	-0.06551	0.00365	-0.03978	-0.00072	-0.00252
#2	-0.00113	-0.00100	-0.00297	-0.01031	-0.07658	0.00363	-0.04101	-0.00079	-0.00205
Mean	-0.00077	-0.00090	-0.00293	-0.01031	-0.07105	0.00364	-0.04039	-0.00075	-0.00229
%RSD	66.77696	14.42764	1.89995	0.00000	11.01383	0.22447	2.16239	7.31346	14.68625
	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.07591	-0.00193	0.01000	-0.00175	-0.00130	-0.02521	-0.00147	-0.00086	-0.00056
#2	-0.07644	-0.00279	-0.00038	-0.00167	-0.00150	-0.02521	0.00064	0.00081	-0.00187
Mean	-0.07617	-0.00236	0.00481	-0.00171	-0.00140	-0.02521	-0.00041	-0.00002	-0.00122
%RSD	0.48946	25.80730	152.45988	3.21631	10.27805	0.00000	361.24839	4790.00627	76.08008
	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.02579	0.00164	-0.00318	-0.00034	-0.00182	0.00197	-0.01347	-0.00055	0.00786
#2	-0.02641	-0.00086	-0.00321	-0.00116	-0.00169	0.00606	-0.02213	-0.00090	0.00786
Mean	-0.02610	0.00039	-0.00320	-0.00075	-0.00175	0.00402	-0.01780	-0.00072	0.00786
%RSD	1.70061	449.21421	0.63706	77.39366	5.33965	72.04078	34.37913	34.47824	0.00000
	Zr	Pb	Se						
	ppm	calc	calc						
#1	0.00050	-0.00145	-0.00066						
#2	0.00037	-0.00156	-0.00098						
Mean	0.00043	-0.00150	-0.00082						
%RSD	21.68589	5.16108	27.17622						

Method : Paragon File : 111010A  
SampleId1 : IP111010-2RVS SampleId2 :  
Analysis commenced : 10/10/2011 18:04:54  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:04  
[SAMPLE]  
Position : TUBE118

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00933	1.04627	0.05165	0.04617	0.04606	0.01009	0.10164	4.96576	0.01953
#2	0.00919	1.03006	0.04569	0.04686	0.04578	0.01006	0.09725	4.95319	0.02012
Mean	0.00926	1.03817	0.04867	0.04652	0.04592	0.01008	0.09945	4.95947	0.01982
%RSD	1.04404	1.10385	8.65980	1.04786	0.43216	0.24851	3.12004	0.17928	2.10560
	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.01878	0.04752	0.04694	0.94633	7.47051	0.04106	4.90164	0.04666	0.09495
#2	0.01866	0.04672	0.04584	0.94424	7.38426	0.04063	4.86696	0.04634	0.09237
Mean	0.01872	0.04712	0.04639	0.94529	7.42738	0.04085	4.88430	0.04650	0.09366
%RSD	0.46085	1.20570	1.68067	0.15649	0.82117	0.74011	0.50203	0.47487	1.94661

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	7.92662	0.04869	1.00140	0.04978	0.04301	0.97767	0.09852	0.04728	0.04606
#2	7.81194	0.04765	0.99444	0.04886	0.04433	0.94558	0.09428	0.04996	0.04570
Mean	7.86928	0.04817	0.99792	0.04932	0.04367	0.96162	0.09640	0.04862	0.04588
%RSD	1.03042	1.52733	0.49315	1.31229	2.12803	2.35944	3.11074	3.89956	0.56053

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.25451	0.09847	0.04392	-0.00587	0.04306	0.10749	0.46890	0.04736	0.04768
#2	0.24691	0.09525	0.04356	0.00289	0.04324	0.10666	0.45678	0.04701	0.04826
Mean	0.25071	0.09686	0.04374	-0.00149	0.04315	0.10708	0.46284	0.04718	0.04797
%RSD	2.14351	2.34922	0.59097	416.86860	0.28451	0.54597	1.85151	0.52967	0.85700

	Zr	Pb	Se
	ppm	calc	calc
#1	0.04836	0.04527	0.04647
#2	0.04785	0.04584	0.04712
Mean	0.04810	0.04555	0.04679
%RSD	0.73546	0.88765	0.98268

Method : Paragon File : 111010A  
SampleId1 : IP111010-2LCS SampleId2 :  
Analysis commenced : 10/10/2011 18:06:49  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:04  
[SAMPLE]  
Position : TUBE119

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00128	0.04328	0.00502	-0.00359	-0.00097	0.00038	-0.00063	38.68641	-0.00128
#2	-0.00031	0.04051	-0.00141	-0.00359	-0.00093	0.00037	-0.00435	38.75514	-0.00050
Mean	-0.00080	0.04189	0.00180	-0.00359	-0.00095	0.00038	-0.00249	38.72078	-0.00089
%RSD	85.58712	4.67525	252.35108	0.00000	2.61104	3.48028	105.84632	0.12552	61.93024

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00083	-0.00032	-0.00322	-0.00937	35.06735	0.43701	38.51908	0.00061	-0.00225
#2	-0.00041	-0.00028	-0.00281	-0.00844	34.96515	0.43573	38.47582	0.00085	-0.00110
Mean	-0.00062	-0.00030	-0.00302	-0.00891	35.01625	0.43637	38.49745	0.00073	-0.00168
%RSD	48.42410	10.23098	9.63787	7.41560	0.20639	0.20848	0.07946	22.73304	48.66108

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	34.79472	-0.00300	9.82605	-0.00212	-0.00075	-0.01647	-0.00426	0.00226	-0.00187
#2	34.73978	-0.00178	9.86189	0.00241	-0.00144	-0.01647	-0.00158	-0.00590	-0.00376
Mean	34.76725	-0.00239	9.84397	0.00014	-0.00110	-0.01647	-0.00292	-0.00182	-0.00281
%RSD	0.11174	36.03270	0.25747	2228.75864	44.34896	0.00000	64.90209	317.68630	47.47869

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.02673	-0.00122	-0.00300	-0.02624	-0.00126	0.00287	-0.02732	-0.00058	0.00205
#2	-0.02568	-0.00300	-0.00295	-0.03115	-0.00131	0.00789	-0.00655	-0.00002	0.00147
<b>Mean</b>	<b>-0.02621</b>	<b>-0.00211</b>	<b>-0.00298</b>	<b>-0.02870</b>	<b>-0.00129</b>	<b>0.00538</b>	<b>-0.01694</b>	<b>-0.00030</b>	<b>0.00176</b>
%RSD	2.81790	59.92650	1.14055	12.09639	2.72172	65.93053	86.71914	133.12876	23.39593

	Zr ppm	Pb calc	Se calc
#1	0.00221	-0.00121	-0.00049
#2	0.00295	-0.00016	-0.00447
<b>Mean</b>	<b>0.00258</b>	<b>-0.00068</b>	<b>-0.00248</b>
%RSD	20.05049	108.33681	113.36706

Method : Paragon File : 111010A  
SampleId1 : 1110088-1 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:08:44  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:04  
[SAMPLE]  
Position : TUBE120

# Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00050	0.04218	-0.00179	0.08623	0.01358	0.00049	-0.00306	239.04376	-0.00036
#2	0.00043	0.04485	-0.00085	0.08664	0.01344	0.00048	-0.00143	239.30468	-0.00040
<b>Mean</b>	<b>-0.00003</b>	<b>0.04351</b>	<b>-0.00132</b>	<b>0.08644</b>	<b>0.01351</b>	<b>0.00049</b>	<b>-0.00224</b>	<b>239.17422</b>	<b>-0.00038</b>
%RSD	2081.22648	4.32696	50.70183	0.33842	0.73393	0.73179	51.24750	0.07714	7.54503

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00087	-0.00048	-0.00169	-0.00886	25.26129	0.02633	32.49334	0.00116	0.38716
#2	-0.00014	-0.00051	-0.00101	-0.00813	25.25234	0.02627	32.47282	0.00116	0.38641
<b>Mean</b>	<b>-0.00051</b>	<b>-0.00050</b>	<b>-0.00135</b>	<b>-0.00849</b>	<b>25.25682</b>	<b>0.02630</b>	<b>32.48308</b>	<b>0.00116</b>	<b>0.38679</b>
%RSD	101.65579	4.26109	35.56897	6.04968	0.02507	0.16311	0.04466	0.00000	0.13673

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	45.87049	-0.00098	0.60562	-0.00145	-0.00180	245.48880	0.00061	0.02144	0.00779
#2	45.86370	0.00122	0.61418	0.00002	-0.00134	245.59476	0.00182	0.00541	0.00423
<b>Mean</b>	<b>45.86709</b>	<b>0.00012</b>	<b>0.60990</b>	<b>-0.00071</b>	<b>-0.00157</b>	<b>245.54178</b>	<b>0.00122</b>	<b>0.01343</b>	<b>0.00601</b>
%RSD	0.01046	1294.58103	0.99287	146.26528	20.43063	0.03051	70.83375	84.39480	41.85793

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	8.86699	-0.00050	1.95113	-0.02934	-0.00259	0.00197	-0.01982	0.00005	0.00437
#2	8.86296	0.00093	1.95081	-0.02424	-0.00262	-0.00021	-0.01405	0.00058	0.00466
<b>Mean</b>	<b>8.86497</b>	<b>0.00022</b>	<b>1.95097</b>	<b>-0.02679</b>	<b>-0.00261</b>	<b>0.00088</b>	<b>-0.01694</b>	<b>0.00032</b>	<b>0.00452</b>
%RSD	0.03216	467.73773	0.01173	13.47139	0.67262	176.04590	24.08688	117.86633	4.54892

	Zr ppm	Pb calc	Se calc
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#1	0.00153	-0.00168	0.01234	UNDGREEN
#2	0.00141	-0.00089	0.00463	
Mean	0.00147	-0.00128	0.00848	
%RSD	5.58398	43.70735	64.27767	

Method : Paragon                      File : 111010A  
SampleId1 : CCV                      SampleId2 :  
Analysis commenced : 10/10/2011 18:10:37  
Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:38:05  
[CV]

Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19156	51.70187	0.49124	0.97996	0.95981	0.46719	0.52858	50.32454	0.49923
#2	0.19174	51.62134	0.49932	0.98308	0.96067	0.46681	0.52080	50.15700	0.49668
Mean	0.19165	51.66160	0.49528	0.98152	0.96024	0.46700	0.52469	50.24077	0.49795
%RSD	0.06721	0.11023	1.15368	0.22427	0.06281	0.05661	1.04836	0.23580	0.36275

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.47239	0.93671	1.02229	19.57692	48.11982	0.48434	50.26890	0.92796	0.96118
#2	0.47428	0.93629	1.02544	19.54222	48.16548	0.48503	50.28284	0.92733	0.96152
Mean	0.47333	0.93650	1.02386	19.55957	48.14265	0.48468	50.27587	0.92765	0.96135
%RSD	0.28174	0.03188	0.21744	0.12541	0.06708	0.10099	0.01961	0.04825	0.02510

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	48.29329	0.97978	5.08034	0.96024	0.93970	5.13278	0.47925	0.99287	0.97287
#2	48.24662	0.97784	5.05184	0.96324	0.93673	5.12398	0.48393	1.00477	0.97484
Mean	48.26996	0.97881	5.06609	0.96174	0.93821	5.12838	0.48159	0.99882	0.97385
%RSD	0.06837	0.14009	0.39780	0.22052	0.22426	0.12124	0.68751	0.84241	0.14347

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.72987	1.03794	0.48041	0.33570	0.44786	0.53537	4.67306	0.47023	0.95037
#2	4.72702	1.04296	0.48059	0.34247	0.44793	0.52074	4.70259	0.47062	0.94950
Mean	4.72845	1.04045	0.48050	0.33908	0.44790	0.52806	4.68782	0.47042	0.94993
%RSD	0.04261	0.34120	0.02722	1.41044	0.01176	1.95968	0.44547	0.05752	0.06530

	Zr ppm	Pb calc	Se calc
#1	0.97498	0.94654	0.97953
#2	0.97344	0.94555	0.98481
Mean	0.97421	0.94605	0.98217
%RSD	0.11169	0.07369	0.38017

Method : Paragon                      File : 111010A  
SampleId1 : CCB                      SampleId2 :  
Analysis commenced : 10/10/2011 18:12:38

Printed : 10/11/2011 11:38:05  
[CB]

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00001	0.06427	-0.00104	-0.00180	-0.00023	0.00041	0.00084	0.01758	-0.00016
#2	-0.00016	0.05838	0.00038	-0.00208	-0.00020	0.00046	-0.00646	0.02252	-0.00024
Mean	-0.00009	0.06133	-0.00033	-0.00194	-0.00021	0.00044	-0.00281	0.02005	-0.00020
%RSD	118.48334	6.79450	307.77073	10.05534	11.62764	8.21601	183.87505	17.42290	27.64937
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00035	-0.00011	-0.00170	0.01460	-0.05806	0.00384	-0.00436	0.00022	-0.00069
#2	0.00002	0.00037	-0.00187	0.01533	-0.06235	0.00386	0.00552	0.00022	-0.00056
Mean	-0.00016	0.00013	-0.00179	0.01497	-0.06021	0.00385	0.00058	0.00022	-0.00062
%RSD	157.23606	262.99776	6.72122	3.43313	5.03972	0.37145	1212.00735	0.00000	15.36681
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.04806	0.00057	0.00700	0.00054	-0.00010	-0.01647	0.00087	-0.00310	-0.00056
#2	-0.04547	-0.00095	-0.00199	0.00151	-0.00034	-0.01064	-0.00147	-0.00153	-0.00165
Mean	-0.04676	-0.00019	0.00251	0.00103	-0.00022	-0.01356	-0.00030	-0.00232	-0.00110
%RSD	3.91563	558.40420	253.67483	67.08537	78.35000	30.39291	551.10198	47.82270	69.95598
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.01701	-0.00443	-0.00273	-0.00330	-0.00154	-0.00102	-0.00772	0.00009	-0.00115
#2	-0.01561	-0.00157	-0.00270	-0.00317	-0.00157	0.00271	-0.00945	-0.00008	-0.00028
Mean	-0.01631	-0.00300	-0.00272	-0.00323	-0.00155	0.00085	-0.00859	0.00000	-0.00071
%RSD	6.05074	67.35445	0.74963	2.87718	1.50543	312.04250	14.25875	2715.98965	86.39863
	Zr ppm	Pb calc	Se calc						
#1	0.00164	0.00011	-0.00140						
#2	0.00162	0.00027	-0.00161						
Mean	0.00163	0.00019	-0.00151						
%RSD	0.87877	58.46462	9.61338						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:05

SampleId1 : 1110088-1D 2X

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 18:14:35

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE121

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00083	0.02931	-0.00217	0.08692	0.01393	0.00053	-0.00646	239.60534	-0.00038
#2	-0.00035	0.01908	0.00095	0.08733	0.01372	0.00042	-0.00192	240.37188	-0.00033

<b>Mean</b>	<b>-0.00059</b>	<b>0.02420</b>	<b>-0.00061</b>	<b>0.08713</b>	<b>0.01383</b>	<b>0.00047</b>	<b>-0.00419</b>	<b>239.98861</b>	<b>-0.00035</b>
<b>%RSD</b>	<b>58.05061</b>	<b>29.90682</b>	<b>361.99038</b>	<b>0.33574</b>	<b>1.07578</b>	<b>16.24867</b>	<b>76.69913</b>	<b>0.22586</b>	<b>9.47047</b>
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00063	-0.00110	-0.00014	-0.00315	25.39352	0.02651	32.90080	0.00131	0.38934
#2	-0.00069	-0.00048	-0.00015	-0.00564	25.26153	0.02637	32.88488	0.00131	0.39015
<b>Mean</b>	<b>-0.00066</b>	<b>-0.00079</b>	<b>-0.00015</b>	<b>-0.00439</b>	<b>25.32752</b>	<b>0.02644</b>	<b>32.89284</b>	<b>0.00131</b>	<b>0.38974</b>
<b>%RSD</b>	<b>6.54302</b>	<b>55.21691</b>	<b>2.83809</b>	<b>40.10421</b>	<b>0.36850</b>	<b>0.37088</b>	<b>0.03421</b>	<b>0.00000</b>	<b>0.14803</b>
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	46.30404	-0.00024	0.60724	-0.00799	0.00164	250.47398	-0.00137	0.00618	0.00968
#2	46.19802	-0.00125	0.60469	-0.00403	-0.00289	250.91408	0.00074	0.01269	0.00961
<b>Mean</b>	<b>46.25103</b>	<b>-0.00074</b>	<b>0.60597</b>	<b>-0.00601</b>	<b>-0.00062</b>	<b>250.69403</b>	<b>-0.00031</b>	<b>0.00944</b>	<b>0.00965</b>
<b>%RSD</b>	<b>0.16209</b>	<b>96.32765</b>	<b>0.29709</b>	<b>46.69199</b>	<b>514.23012</b>	<b>0.12414</b>	<b>476.45929</b>	<b>48.75843</b>	<b>0.53705</b>
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	9.04967	0.00272	1.97170	-0.03617	-0.00259	0.00624	-0.03194	-0.00030	0.00466
#2	9.05673	0.00451	1.96545	-0.03627	-0.00264	0.00151	-0.02444	-0.00009	0.00612
<b>Mean</b>	<b>9.05320</b>	<b>0.00361</b>	<b>1.96858</b>	<b>-0.03622</b>	<b>-0.00262</b>	<b>0.00388</b>	<b>-0.02819</b>	<b>-0.00019</b>	<b>0.00539</b>
<b>%RSD</b>	<b>0.05511</b>	<b>34.99037</b>	<b>0.22462</b>	<b>0.21090</b>	<b>1.56448</b>	<b>86.30410</b>	<b>18.81833</b>	<b>77.29681</b>	<b>19.06523</b>
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00204	-0.00157	0.00852						
#2	0.00220	-0.00326	0.01064						
<b>Mean</b>	<b>0.00212</b>	<b>-0.00242</b>	<b>0.00958</b>						
<b>%RSD</b>	<b>5.61234</b>	<b>49.67026</b>	<b>15.63649</b>						

Method : Paragon File : 111010A  
SampleId1 : 1110088-1L 10X SampleId2 :  
Analysis commenced : 10/10/2011 18:16:26  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:05  
[SAMPLE]  
Position : TUBE122

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00025	0.01607	-0.00434	0.01474	0.00215	0.00029	-0.00306	46.16561	-0.00053
#2	-0.00083	0.01424	-0.00075	0.01543	0.00212	0.00023	-0.00160	46.17200	-0.00040
<b>Mean</b>	<b>-0.00054</b>	<b>0.01516</b>	<b>-0.00255</b>	<b>0.01509</b>	<b>0.00214</b>	<b>0.00026</b>	<b>-0.00233</b>	<b>46.16880</b>	<b>-0.00047</b>
<b>%RSD</b>	<b>76.30970</b>	<b>8.56513</b>	<b>99.71641</b>	<b>3.23079</b>	<b>1.16076</b>	<b>18.68768</b>	<b>44.30620</b>	<b>0.00978</b>	<b>19.60241</b>
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00052	-0.00089	-0.00186	-0.00709	3.98454	0.00730	6.64004	-0.00025	0.07887
#2	-0.00119	-0.00051	-0.00220	-0.00751	3.98045	0.00729	6.64128	-0.00017	0.08009
<b>Mean</b>	<b>-0.00086</b>	<b>-0.00070</b>	<b>-0.00203</b>	<b>-0.00730</b>	<b>3.98249</b>	<b>0.00729</b>	<b>6.64066</b>	<b>-0.00021</b>	<b>0.07948</b>



%RSD	55.06095	38.57455	11.75447	4.02236	0.07269	0.14004	0.01320	26.49818	1.08648
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	7.98815	-0.00157	0.12097	-0.00051	0.00008	49.62752	-0.00067	0.00720	-0.00201
#2	7.97031	-0.00178	0.12166	-0.00391	-0.00105	49.69831	-0.00022	0.00417	0.00184
<b>Mean</b>	<b>7.97923</b>	<b>-0.00168</b>	<b>0.12132</b>	<b>-0.00221</b>	<b>-0.00048</b>	<b>49.66292</b>	<b>-0.00045</b>	<b>0.00569</b>	<b>-0.00009</b>
%RSD	0.15809	8.76708	0.40354	108.73850	163.94124	0.10079	71.58730	37.68443	3076.44396
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.82921	0.00057	0.39855	-0.01094	-0.00204	0.00661	-0.01982	-0.00051	0.00030
#2	1.82708	0.00165	0.39879	-0.01022	-0.00202	0.00096	-0.02559	-0.00051	0.00059
<b>Mean</b>	<b>1.82815</b>	<b>0.00111</b>	<b>0.39867</b>	<b>-0.01058</b>	<b>-0.00203</b>	<b>0.00379</b>	<b>-0.02271</b>	<b>-0.00051</b>	<b>0.00045</b>
%RSD	0.08257	68.36583	0.04307	4.79822	0.57516	105.45516	17.96628	0.01112	45.77541
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00114	-0.00012	0.00106						
#2	0.00087	-0.00200	0.00261						
<b>Mean</b>	<b>0.00100</b>	<b>-0.00106</b>	<b>0.00183</b>						
%RSD	18.75974	125.58637	60.09210						

Method : Paragon File : 111010A  
SampleId1 : 1110088-1MS 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:18:18  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:05

[SAMPLE]

Position : TUBE123

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00040	0.01462	0.00048	0.08437	0.01344	0.00036	-0.00468	256.52146	-0.00070
#2	-0.00011	0.01582	-0.00141	0.08671	0.01341	0.00032	-0.00208	256.12889	-0.00045
<b>Mean</b>	<b>-0.00025</b>	<b>0.01522</b>	<b>-0.00047</b>	<b>0.08554</b>	<b>0.01343</b>	<b>0.00034</b>	<b>-0.00338</b>	<b>256.32517</b>	<b>-0.00058</b>
%RSD	79.39285	5.58378	285.91624	1.93779	0.18468	6.42984	54.39502	0.10829	31.03199
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00087	-0.00040	-0.00152	-0.00751	44.67594	0.27050	51.52741	0.00178	0.38267
#2	-0.00063	-0.00054	-0.00170	-0.00688	44.57391	0.26979	51.43018	0.00186	0.38539
<b>Mean</b>	<b>-0.00075</b>	<b>-0.00047</b>	<b>-0.00161</b>	<b>-0.00719</b>	<b>44.62492</b>	<b>0.27014</b>	<b>51.47879</b>	<b>0.00182</b>	<b>0.38403</b>
%RSD	22.90704	21.20324	7.96359	6.12059	0.16167	0.18661	0.13355	3.03074	0.50075
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	64.55637	-0.00047	5.43747	-0.00318	-0.00169	246.90708	-0.00010	0.00843	0.00939
#2	64.49011	-0.00086	5.42462	-0.00193	0.00013	246.42441	0.00137	0.01035	0.00823
<b>Mean</b>	<b>64.52324</b>	<b>-0.00067</b>	<b>5.43104</b>	<b>-0.00256</b>	<b>-0.00078</b>	<b>246.66575</b>	<b>0.00064</b>	<b>0.00939</b>	<b>0.00881</b>
%RSD	0.07261	40.93112	0.16733	34.52110	165.16042	0.13837	163.60125	14.42450	9.32965

ted: 10/11/2011 11:38:23 User: MIKE LUNDGREEN

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	8.85176	-0.00121	1.94405	-0.03432	-0.00221	0.00060	-0.02040	0.00016	0.00059
#2	8.86620	-0.00193	1.93874	-0.03321	-0.00234	-0.00103	-0.00713	-0.00019	0.00001
Mean	8.85898	-0.00157	1.94139	-0.03377	-0.00227	-0.00021	-0.01376	-0.00002	0.00030
%RSD	0.11526	32.16071	0.19373	2.33081	4.11585	540.28242	68.17281	1437.78124	135.36607

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00119	-0.00219	0.00907
#2	0.00128	-0.00056	0.00894
Mean	0.00123	-0.00137	0.00901
%RSD	5.10019	84.11865	1.07928

Method : Paragon File : 111010A  
SampleId1 : 1110088-1MSD 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:20:11  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:05  
[SAMPLE]

Position : TUBE124

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00029	0.00937	-0.00491	0.08678	0.01383	0.00035	-0.00338	262.00366	-0.00065
#2	-0.00035	0.01243	0.00313	0.08720	0.01362	0.00033	-0.00452	261.04072	-0.00034
Mean	-0.00032	0.01090	-0.00089	0.08699	0.01372	0.00034	-0.00395	261.52219	-0.00050
%RSD	11.60596	19.82848	636.33058	0.33627	1.08402	4.78147	20.29098	0.26036	43.45331

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00032	-0.00045	-0.00168	-0.00813	45.57397	0.27622	52.62470	0.00178	0.39117
#2	-0.00051	-0.00043	-0.00135	-0.00771	45.21329	0.27421	52.30412	0.00194	0.38770
Mean	-0.00041	-0.00044	-0.00152	-0.00792	45.39363	0.27522	52.46441	0.00186	0.38944
%RSD	31.09811	3.93876	15.79349	3.70611	0.56183	0.51540	0.43207	5.93431	0.62962

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	65.82784	-0.00071	5.58652	0.00029	0.00157	251.69561	-0.00058	0.00451	0.00968
#2	65.33474	0.00009	5.52246	0.00180	-0.00211	250.76736	0.00061	0.01202	0.00467
Mean	65.58129	-0.00031	5.55449	0.00105	-0.00027	251.23149	0.00001	0.00826	0.00718
%RSD	0.53167	182.55494	0.81558	101.92624	953.37567	0.26126	6138.58605	64.29767	49.39441

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	9.06500	-0.00121	1.97169	-0.03848	-0.00250	0.00032	-0.02790	0.00005	-0.00028
#2	9.00694	-0.00300	1.96014	-0.03415	-0.00231	0.00215	-0.02329	0.00055	0.00059
Mean	9.03597	-0.00211	1.96591	-0.03631	-0.00241	0.00124	-0.02559	0.00030	0.00016
%RSD	0.45428	59.97291	0.41561	8.44458	5.58149	104.33123	12.75285	116.42378	389.42270

	<b>Zr</b>	<b>Pb</b>	<b>SeUNDGREEN</b>
	ppm	calc	calc
#1	0.00133	0.00114	0.00796
#2	0.00137	-0.00081	0.00712
<b>Mean</b>	<b>0.00135</b>	<b>0.00017</b>	<b>0.00754</b>
%RSD	1.87431	827.82233	7.89944

Method : Paragon File : 111010A  
SampleId1 : 1110088-2 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:22:04  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:06

[SAMPLE]

Position : TUBE125

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00019	0.00617	0.00199	0.08533	0.01330	0.00026	0.00084	238.02017	-0.00015
#2	-0.00049	0.00505	-0.00255	0.08657	0.01330	0.00026	0.00165	237.09239	-0.00036
<b>Mean</b>	<b>-0.00034</b>	<b>0.00561</b>	<b>-0.00028</b>	<b>0.08595</b>	<b>0.01330</b>	<b>0.00026</b>	<b>0.00124</b>	<b>237.55628</b>	<b>-0.00025</b>
%RSD	61.60517	14.08466	1152.10829	1.02095	0.00000	0.02012	46.29677	0.27616	58.64086

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00057	-0.00037	-0.00195	-0.00886	25.03815	0.02602	32.51637	0.00116	0.38641
#2	-0.00039	-0.00078	-0.00144	-0.00937	24.96183	0.02595	32.48748	0.00116	0.38505
<b>Mean</b>	<b>-0.00048</b>	<b>-0.00058</b>	<b>-0.00169</b>	<b>-0.00912</b>	<b>24.99999</b>	<b>0.02598</b>	<b>32.50192</b>	<b>0.00116</b>	<b>0.38573</b>
%RSD	26.99400	49.84987	21.31751	4.02595	0.21588	0.17295	0.06286	0.00000	0.24928

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	45.71237	-0.00050	0.58849	0.00046	-0.00180	247.71925	0.00027	0.01953	0.00830
#2	45.55146	0.00074	0.60654	-0.00104	-0.00138	248.06694	0.00015	0.00160	0.01012
<b>Mean</b>	<b>45.63192</b>	<b>0.00012</b>	<b>0.59752</b>	<b>-0.00029</b>	<b>-0.00159</b>	<b>247.89309</b>	<b>0.00021</b>	<b>0.01056</b>	<b>0.00921</b>
%RSD	0.24934	734.77210	2.13630	365.75958	18.64265	0.09918	40.66058	120.00877	13.94340

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	8.95826	0.00093	1.94579	-0.02158	-0.00260	0.00460	-0.02328	0.00065	0.00234
#2	8.94857	0.00093	1.93599	-0.03053	-0.00253	-0.00377	-0.01867	0.00058	0.00205
<b>Mean</b>	<b>8.95342</b>	<b>0.00093</b>	<b>1.94089</b>	<b>-0.02605</b>	<b>-0.00257</b>	<b>0.00042</b>	<b>-0.02098</b>	<b>0.00062</b>	<b>0.00219</b>
%RSD	0.07647	0.00657	0.35734	24.28907	2.05036	1415.52868	15.56195	8.09376	9.37226

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00037	-0.00104	0.01204
#2	0.00106	-0.00126	0.00728
<b>Mean</b>	<b>0.00071</b>	<b>-0.00115</b>	<b>0.00966</b>
%RSD	68.64849	13.46722	34.82900

Method : Paragon File : 111010A

Printed : 10/11/2011 11:38:06

SampleId1 : 1110088-3 2X      SampleId2 :  
 Analysis commenced : 10/10/2011 18:23:56  
 Dilution ratio : 1.00000 to 1.00000      Tray :

[SAMPLE]

Position : TUBE126

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00092	0.00236	-0.00349	0.08651	0.01341	0.00026	-0.00274	237.27092	-0.00042
#2	-0.00044	-0.00084	-0.00576	0.08768	0.01348	0.00019	-0.00127	238.17664	-0.00063
<b>Mean</b>	<b>-0.00068</b>	<b>0.00076</b>	<b>-0.00463</b>	<b>0.08709</b>	<b>0.01344</b>	<b>0.00023</b>	<b>-0.00201</b>	<b>237.72378</b>	<b>-0.00052</b>
%RSD	49.35261	296.76061	34.67100	0.95164	0.36888	20.87651	51.68802	0.26941	28.07514
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00123	-0.00155	-0.00219	-0.00875	25.28580	0.02624	32.78814	0.00116	0.38709
#2	-0.00045	-0.00067	-0.00220	-0.00844	25.11048	0.02607	32.66586	0.00116	0.38648
<b>Mean</b>	<b>-0.00084</b>	<b>-0.00111</b>	<b>-0.00220</b>	<b>-0.00860</b>	<b>25.19814</b>	<b>0.02615</b>	<b>32.72700</b>	<b>0.00116</b>	<b>0.38679</b>
%RSD	66.33185	55.92736	0.50504	2.56141	0.49199	0.43738	0.26420	0.00000	0.11187
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	46.18498	-0.00116	0.81243	-0.00628	0.00175	248.87248	-0.00050	0.00976	0.00990
#2	45.86713	-0.00146	0.81104	-0.00360	-0.00166	249.23879	-0.00084	0.00687	0.00845
<b>Mean</b>	<b>46.02606</b>	<b>-0.00131</b>	<b>0.81173</b>	<b>-0.00494</b>	<b>0.00005</b>	<b>249.05563</b>	<b>-0.00067</b>	<b>0.00831</b>	<b>0.00918</b>
%RSD	0.48833	16.08586	0.12112	38.38125	5191.55564	0.10400	36.77142	24.64440	11.20152
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	9.02522	0.00165	1.95651	-0.02893	-0.00268	0.00059	-0.04059	-0.00055	0.00059
#2	8.99226	-0.00264	1.95020	-0.02964	-0.00240	0.00634	-0.02040	-0.00012	-0.00028
<b>Mean</b>	<b>9.00874</b>	<b>-0.00050</b>	<b>1.95335</b>	<b>-0.02928</b>	<b>-0.00254</b>	<b>0.00346</b>	<b>-0.03050</b>	<b>-0.00034</b>	<b>0.00016</b>
%RSD	0.25870	608.09425	0.22812	1.71454	7.83416	117.33727	46.82409	89.33768	389.42270
	Zr ppm	Pb calc	Se calc						
#1	0.00026	-0.00092	0.00986						
#2	0.00067	-0.00230	0.00792						
<b>Mean</b>	<b>0.00047</b>	<b>-0.00161</b>	<b>0.00889</b>						
%RSD	60.83465	60.44412	15.38889						

Method : Paragon      File : 111010A  
 SampleId1 : 1110088-4 2X      SampleId2 :  
 Analysis commenced : 10/10/2011 18:25:49  
 Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:38:06

[SAMPLE]

Position : TUBE127

Final concentrations

Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
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#1	-0.00031	-0.00474	0.00729	0.08361	0.01390	0.00021	-0.00094	244.40987	-0.00054
#2	-0.00129	-0.00499	-0.00141	0.08299	0.01376	0.00016	-0.00971	239.96869	-0.00060
Mean	-0.00080	-0.00486	0.00294	0.08330	0.01383	0.00019	-0.00532	242.18928	-0.00057
%RSD	86.27524	3.58032	209.48414	0.52674	0.71718	19.88182	116.45818	1.29667	7.44882

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00105	-0.00055	-0.00154	-0.01010	25.09069	0.02594	32.23836	0.00077	0.38553
#2	-0.00148	-0.00106	-0.00264	-0.01031	24.95029	0.02583	31.95452	0.00069	0.38056
Mean	-0.00126	-0.00080	-0.00209	-0.01021	25.02049	0.02589	32.09644	0.00073	0.38305
%RSD	23.75699	44.60726	37.34041	1.43838	0.39680	0.29984	0.62531	7.57768	0.91622

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	45.75613	0.00063	0.17221	-0.00325	-0.00150	247.75584	-0.00007	0.00924	0.00489
#2	45.51110	0.00006	0.16436	-0.00812	0.00263	245.89440	-0.00334	0.01495	0.01484
Mean	45.63362	0.00034	0.16829	-0.00568	0.00056	246.82512	-0.00171	0.01209	0.00986
%RSD	0.37968	116.40287	3.29787	60.55421	519.37772	0.53327	135.29167	33.37632	71.35568

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	8.92083	0.00379	1.95194	-0.01805	-0.00232	0.00480	0.00441	0.00055	0.00030
#2	8.83891	-0.00014	1.93871	-0.03008	-0.00228	0.00061	-0.00540	-0.00041	-0.00057
Mean	8.87987	0.00182	1.94532	-0.02407	-0.00230	0.00271	-0.00049	0.00007	-0.00013
%RSD	0.65236	152.40390	0.48118	35.32205	1.27003	109.56443	1411.17065	958.53974	465.95259

	Zr ppm	Pb calc	Se calc
#1	0.00028	-0.00209	0.00634
#2	0.00047	-0.00095	0.01488
Mean	0.00037	-0.00152	0.01061
%RSD	36.37635	53.01402	56.93594

Method : Paragon File : 111010A  
SampleId1 : 1110088-5 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:27:43  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:06  
[SAMPLE]

Position : TUBE128

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00012	-0.00174	-0.00066	0.08582	0.01457	0.00022	-0.00370	246.03148	-0.00027
#2	-0.00099	-0.00294	0.00625	0.08423	0.01457	0.00020	-0.00208	245.80376	-0.00052
Mean	-0.00056	-0.00234	0.00279	0.08502	0.01457	0.00021	-0.00289	245.91762	-0.00039
%RSD	111.46016	36.04229	174.65958	1.31883	0.00000	7.49040	39.67376	0.06548	45.51618

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00038	-0.00117	-0.00180	-0.00813	25.58283	0.02642	32.67759	0.00209	0.38920

#2	-0.00105	-0.00122	-0.00136	-0.00834	25.48782	0.02631	32.63362	0.00209	0.39002
<b>Mean</b>	<b>-0.00072</b>	<b>-0.00120</b>	<b>-0.00158</b>	<b>-0.00823</b>	<b>25.53532</b>	<b>0.02637</b>	<b>32.65560</b>	<b>0.00209</b>	<b>0.38961</b>
%RSD	65.79220	2.78949	19.59165	1.78296	0.26312	0.29442	0.09521	0.00000	0.14808

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	46.66029	-0.00089	0.16875	-0.00103	0.00139	250.81871	-0.00104	0.01160	0.00511
#2	46.47098	-0.00068	0.16990	-0.00278	0.00038	250.49965	0.00186	0.01327	0.00838
<b>Mean</b>	<b>46.56564</b>	<b>-0.00079</b>	<b>0.16933</b>	<b>-0.00190</b>	<b>0.00088</b>	<b>250.65918</b>	<b>0.00041</b>	<b>0.01243</b>	<b>0.00674</b>
%RSD	0.28747	18.70780	0.48201	64.95811	80.86210	0.09001	497.21849	9.50537	34.30101

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	9.05515	-0.00121	1.97888	-0.02664	-0.00255	0.00544	0.00730	0.00012	0.00030
#2	9.03312	0.00093	1.97816	-0.03161	-0.00252	-0.00194	-0.00540	0.00005	0.00001
<b>Mean</b>	<b>9.04413</b>	<b>-0.00014</b>	<b>1.97852</b>	<b>-0.02912</b>	<b>-0.00254</b>	<b>0.00175</b>	<b>0.00095</b>	<b>0.00009</b>	<b>0.00016</b>
%RSD	0.17230	1072.68240	0.02568	12.04687	0.92167	297.92494	945.16996	56.54062	129.80803

	Zr ppm	Pb calc	Se calc
#1	0.00036	0.00058	0.00727
#2	0.00079	-0.00067	0.01000
<b>Mean</b>	<b>0.00058</b>	<b>-0.00004</b>	<b>0.00864</b>
%RSD	53.66830	2043.34211	22.41507

Method : Paragon File : 111010A  
SampleId1 : 1110088-6 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:29:38  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:06  
[SAMPLE]

Position : TUBE129

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00057	0.00100	0.00558	0.08720	0.01948	0.00022	-0.00189	261.00762	-0.00050
#2	-0.00052	0.00316	0.00473	0.08713	0.01951	0.00021	-0.00676	260.07614	-0.00034
<b>Mean</b>	<b>-0.00054</b>	<b>0.00208</b>	<b>0.00516</b>	<b>0.08716</b>	<b>0.01949</b>	<b>0.00022</b>	<b>-0.00433</b>	<b>260.54188</b>	<b>-0.00042</b>
%RSD	6.06675	73.61400	11.66582	0.05593	0.12721	3.81188	79.52349	0.25280	27.10271

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00098	-0.00048	0.00461	-0.00159	25.56444	0.02643	33.18435	0.00755	0.39138
#2	-0.00068	-0.00118	0.00452	-0.00169	25.58024	0.02643	33.15126	0.00748	0.39348
<b>Mean</b>	<b>-0.00083</b>	<b>-0.00083</b>	<b>0.00457</b>	<b>-0.00164</b>	<b>25.57234</b>	<b>0.02643</b>	<b>33.16780</b>	<b>0.00752</b>	<b>0.39243</b>
%RSD	25.80545	60.08593	1.35916	4.47095	0.04368	0.00773	0.07055	0.73408	0.37980

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	46.61441	-0.00039	5.46841	-0.00268	0.00036	251.40203	-0.00036	0.01519	0.00809
#2	46.53474	-0.00092	5.47151	-0.00454	-0.00006	251.21123	0.00156	0.00734	0.01114

<b>Mean</b>	<b>46.57457</b>	<b>-0.00065</b>	<b>5.46996</b>	<b>-0.00361</b>	<b>0.00015</b>	<b>251.30663</b>	<b>0.00060</b>	<b>0.01127</b>	<b>0.00961</b>
%RSD	0.12094	57.96436	0.04000	36.49358	202.35188	0.05368	226.07347	49.22690	22.45044
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	9.04504	0.00308	2.07096	-0.02477	-0.00265	0.00254	0.01595	0.00012	0.00815
#2	9.05178	0.00165	2.07432	-0.03146	-0.00268	0.00236	0.01883	-0.00016	0.00902
<b>Mean</b>	<b>9.04841</b>	<b>0.00236</b>	<b>2.07264</b>	<b>-0.02811</b>	<b>-0.00266</b>	<b>0.00245</b>	<b>0.01739</b>	<b>-0.00002</b>	<b>0.00859</b>
%RSD	0.05269	42.82243	0.11491	16.81189	0.65801	5.20729	11.73147	1226.79676	7.18023
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00039	-0.00065	0.01045						
#2	0.00053	-0.00155	0.00987						
<b>Mean</b>	<b>0.00046</b>	<b>-0.00110</b>	<b>0.01016</b>						
%RSD	20.86661	57.92582	4.01027						

Method : Paragon File : 111010A  
SampleId1 : 1110088-7 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:31:32  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:07

[SAMPLE]

Position : TUBE130

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00047	0.00708	0.00218	0.08775	0.01604	0.00029	0.00036	250.12264	-0.00020
#2	-0.00007	0.00080	0.00180	0.08685	0.01597	0.00024	-0.00224	250.13645	-0.00025
<b>Mean</b>	<b>-0.00027</b>	<b>0.00394</b>	<b>0.00199</b>	<b>0.08730</b>	<b>0.01600</b>	<b>0.00027</b>	<b>-0.00094</b>	<b>250.12954</b>	<b>-0.00022</b>
%RSD	103.58558	112.82891	13.43448	0.72600	0.30989	13.07118	195.52049	0.00390	15.37514
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00008	-0.00058	-0.00146	-0.00927	15.55295	0.02642	33.11817	0.00178	0.39464
#2	-0.00050	-0.00058	-0.00137	-0.00875	15.40707	0.02615	32.94058	0.00170	0.39240
<b>Mean</b>	<b>-0.00029</b>	<b>-0.00058</b>	<b>-0.00141</b>	<b>-0.00901</b>	<b>15.48001</b>	<b>0.02628</b>	<b>33.02938</b>	<b>0.00174</b>	<b>0.39352</b>
%RSD	103.68173	0.07498	4.31974	4.07232	0.66636	0.73054	0.38018	3.16645	0.40319
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	46.28461	-0.00050	1.38555	0.00075	-0.00464	251.54881	0.00100	0.01406	0.00656
#2	45.81026	-0.00012	1.36788	0.00401	-0.00097	250.93976	0.00054	0.01597	0.00867
<b>Mean</b>	<b>46.04744</b>	<b>-0.00031</b>	<b>1.37671</b>	<b>0.00238</b>	<b>-0.00281</b>	<b>251.24429</b>	<b>0.00077</b>	<b>0.01502</b>	<b>0.00761</b>
%RSD	0.72842	87.89676	0.90759	96.95287	92.40078	0.17141	42.45170	8.96830	19.57446
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	9.09288	-0.00622	2.02889	-0.03682	-0.00290	0.00399	0.01018	0.00058	-0.00057
#2	9.03452	-0.00121	2.01683	-0.03027	-0.00249	0.00308	0.00903	0.00041	-0.00202
<b>Mean</b>	<b>9.06370</b>	<b>-0.00372</b>	<b>2.02286</b>	<b>-0.03355</b>	<b>-0.00269</b>	<b>0.00353</b>	<b>0.00961</b>	<b>0.00049</b>	<b>-0.00129</b>

%RSD	0.45535	95.22374	0.42149	13.79468	10.84912	18.23307	8.49805	25.24237	79.35604
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	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00133	-0.00285	0.00906
#2	0.00093	0.00069	0.01110
<b>Mean</b>	<b>0.00113</b>	<b>-0.00108</b>	<b>0.01008</b>
%RSD	24.80092	231.11742	14.31195

Method : Paragon File : 111010A  
SampleId1 : CCV SampleId2 :  
Analysis commenced : 10/10/2011 18:33:29  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:07  
[CV]

Position : STD6

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.19485	52.39612	0.51111	0.98992	0.96387	0.48468	0.51385	51.58868	0.49920
#2	0.19375	52.48312	0.50968	0.99124	0.96838	0.48215	0.51452	51.06242	0.49570
<b>Mean</b>	<b>0.19430</b>	<b>52.43962</b>	<b>0.51040</b>	<b>0.99058</b>	<b>0.96612</b>	<b>0.48341</b>	<b>0.51419</b>	<b>51.32555</b>	<b>0.49745</b>
%RSD	0.39905	0.11730	0.19759	0.09383	0.33040	0.36976	0.09206	0.72502	0.49694

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.48610	0.96539	1.02009	20.16948	48.02727	0.48693	51.50331	0.96136	0.98036
#2	0.48434	0.96094	1.02487	20.08968	48.18234	0.48949	51.47245	0.95685	0.97592
<b>Mean</b>	<b>0.48522</b>	<b>0.96316</b>	<b>1.02248</b>	<b>20.12958</b>	<b>48.10480</b>	<b>0.48821</b>	<b>51.48788</b>	<b>0.95910</b>	<b>0.97814</b>
%RSD	0.25603	0.32732	0.33048	0.28030	0.22794	0.37011	0.04238	0.33265	0.32077

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	48.51568	0.98160	5.14449	0.99546	0.96690	5.33211	0.47867	1.02294	0.99701
#2	48.64677	0.97277	5.14496	0.98891	0.97079	5.26469	0.47824	1.02738	1.00412
<b>Mean</b>	<b>48.58122</b>	<b>0.97719</b>	<b>5.14473</b>	<b>0.99219</b>	<b>0.96884</b>	<b>5.29840</b>	<b>0.47845</b>	<b>1.02516</b>	<b>1.00056</b>
%RSD	0.19080	0.63901	0.00653	0.46657	0.28332	0.89988	0.06455	0.30638	0.50255

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.88256	1.05907	0.48173	0.35722	0.46772	0.52412	4.74614	0.48136	1.01648
#2	4.87451	1.05549	0.48321	0.34811	0.46759	0.52583	4.77339	0.47971	1.00097
<b>Mean</b>	<b>4.87853</b>	<b>1.05728</b>	<b>0.48247</b>	<b>0.35267</b>	<b>0.46766</b>	<b>0.52497</b>	<b>4.75976</b>	<b>0.48053</b>	<b>1.00873</b>
%RSD	0.11664	0.23984	0.21689	1.82777	0.02003	0.23035	0.40482	0.24191	1.08688

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.98781	0.97641	1.00564
#2	0.98658	0.97682	1.01187
<b>Mean</b>	<b>0.98719</b>	<b>0.97662</b>	<b>1.00876</b>
%RSD	0.08785	0.02963	0.43616



ted: 10/11/2011 11:38:23 User: MIKE LUNDGREEN  
 Method : Paragon File : 111010A  
 SampleId1 : CCB SampleId2 :  
 Analysis commenced : 10/10/2011 18:35:27  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:07  
 [CB]

Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00034	0.05813	-0.00104	-0.00242	-0.00009	0.00060	-0.00484	0.04540	-0.00038
#2	-0.00045	0.06123	0.00086	-0.00256	0.00005	0.00062	-0.00451	0.05398	0.00029
Mean	-0.00040	0.05968	-0.00009	-0.00249	-0.00002	0.00061	-0.00468	0.04969	-0.00005
%RSD	20.29428	3.67707	1494.56223	3.91438	486.61366	1.62969	5.03815	12.21030	1001.09230
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00065	-0.00072	-0.00219	0.01876	-0.06145	0.00391	0.00758	0.00030	-0.00076
#2	-0.00053	-0.00076	-0.00127	0.01980	-0.05648	0.00392	0.01293	0.00045	0.00107
Mean	-0.00059	-0.00074	-0.00173	0.01928	-0.05896	0.00392	0.01025	0.00038	0.00016
%RSD	14.53463	3.70248	37.72072	3.80841	5.95841	0.10437	36.91704	29.27081	831.15762
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.03266	-0.00062	-0.00314	-0.00434	0.00148	0.00684	-0.00480	-0.00536	0.00279
#2	-0.03108	-0.00036	0.00124	-0.00237	0.00181	0.00392	-0.00245	-0.00344	-0.00223
Mean	-0.03187	-0.00049	-0.00095	-0.00336	0.00164	0.00538	-0.00362	-0.00440	0.00028
%RSD	3.51153	38.66747	325.37726	41.43596	14.39606	38.28559	45.91904	30.87931	1265.30823
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.01782	-0.00121	-0.00249	-0.00097	-0.00150	-0.00030	-0.03369	-0.00100	0.00030
#2	-0.01603	-0.00157	-0.00239	-0.00115	-0.00124	0.00144	-0.01176	-0.00022	-0.00144
Mean	-0.01693	-0.00139	-0.00244	-0.00106	-0.00137	0.00057	-0.02273	-0.00061	-0.00057
%RSD	7.49789	18.14973	3.06250	11.98785	13.64075	217.46003	68.21873	89.70437	216.98576
	Zr ppm	Pb calc	Se calc						
#1	0.00152	-0.00046	0.00007						
#2	0.00155	0.00042	-0.00263						
Mean	0.00153	-0.00002	-0.00128						
%RSD	1.58329	3058.71821	149.43448						

Method : Paragon File : 111010A  
 SampleId1 : 1110088-8 2X SampleId2 :  
 Analysis commenced : 10/10/2011 18:37:25  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:07  
 [SAMPLE]

Position : TUBE131

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00100	0.03117	-0.00397	0.08692	0.01635	0.00051	-0.00208	248.98147	-0.00014
#2	-0.00109	0.03162	0.00086	0.08630	0.01611	0.00048	-0.00451	249.05183	-0.00050
Mean	-0.00104	0.03140	-0.00156	0.08661	0.01623	0.00050	-0.00330	249.01665	-0.00032
%RSD	6.49024	1.02433	219.27663	0.50662	1.06937	5.04159	52.22268	0.01998	79.17977

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00099	-0.00114	-0.00127	-0.00232	15.46180	0.02642	32.86478	0.00225	0.39172
#2	-0.00141	-0.00071	-0.00187	-0.00491	15.41542	0.02635	32.79191	0.00225	0.39172
Mean	-0.00120	-0.00092	-0.00157	-0.00361	15.43861	0.02638	32.82834	0.00225	0.39172
%RSD	25.07194	33.09723	26.98831	50.77469	0.21243	0.20131	0.15696	0.00000	0.00000

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	46.05564	-0.00009	1.35928	-0.00309	0.00078	249.72247	-0.00168	0.00631	0.00983
#2	45.93053	-0.00003	1.38741	-0.00288	0.00127	248.98602	0.00232	0.01024	0.00990
Mean	45.99309	-0.00006	1.37334	-0.00298	0.00102	249.35424	0.00032	0.00827	0.00987
%RSD	0.19236	72.22149	1.44850	5.06357	34.14113	0.20884	894.62352	33.53177	0.51688

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	9.01053	-0.00264	2.02301	-0.03090	-0.00272	-0.00394	-0.01002	0.00009	-0.00086
#2	8.99499	0.00022	2.02077	-0.02110	-0.00246	0.00179	-0.00886	-0.00030	-0.00057
Mean	9.00276	-0.00121	2.02189	-0.02600	-0.00259	-0.00107	-0.00944	-0.00010	-0.00071
%RSD	0.12207	166.58917	0.07831	26.65561	6.99476	377.53291	8.65775	262.05682	28.79952

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00223	-0.00051	0.00866
#2	0.00143	-0.00011	0.01001
Mean	0.00183	-0.00031	0.00934
%RSD	30.80428	90.63519	10.26102

Method : Paragon File : 111010A  
SampleId1 : 1110088-9 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:39:20  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:07

[SAMPLE]

Position : TUBE132

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00071	0.02160	0.00454	0.08775	0.01744	0.00040	-0.00272	251.66589	-0.00061
#2	0.00007	0.02081	0.00227	0.08692	0.01744	0.00037	-0.00110	252.73773	-0.00068
Mean	-0.00032	0.02121	0.00341	0.08733	0.01744	0.00039	-0.00191	252.20181	-0.00065
%RSD	173.90366	2.63498	47.07099	0.66989	0.00000	6.17292	60.12764	0.30052	7.68500

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00074	-0.00098	-0.00034	-0.00522	15.45322	0.02628	32.76218	0.00287	0.39199
#2	-0.00020	-0.00034	-0.00009	-0.00491	15.34609	0.02620	32.74584	0.00295	0.39002
<b>Mean</b>	<b>-0.00047</b>	<b>-0.00066</b>	<b>-0.00022</b>	<b>-0.00507</b>	<b>15.39966</b>	<b>0.02624</b>	<b>32.75401</b>	<b>0.00291</b>	<b>0.39100</b>
%RSD	82.07338	69.28379	83.83292	4.34550	0.49193	0.20242	0.03526	1.89417	0.35659

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	45.92269	-0.00101	3.03014	-0.00324	0.00178	248.24632	-0.00102	0.00924	0.01114
#2	45.76466	0.00012	3.01559	0.00021	-0.00196	248.20971	0.00308	0.01003	0.00859
<b>Mean</b>	<b>45.84368</b>	<b>-0.00044</b>	<b>3.02287</b>	<b>-0.00152</b>	<b>-0.00009</b>	<b>248.22801</b>	<b>0.00103</b>	<b>0.00963</b>	<b>0.00987</b>
%RSD	0.24374	179.63486	0.34046	161.17764	2981.94544	0.01043	280.82351	5.76892	18.22763

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	8.96052	-0.00014	2.04073	-0.03211	-0.00266	0.00126	0.00614	-0.00023	0.00408
#2	8.95290	0.00129	2.03259	-0.03086	-0.00264	0.00453	0.00787	0.00058	0.00437
<b>Mean</b>	<b>8.95671</b>	<b>0.00057</b>	<b>2.03666</b>	<b>-0.03149</b>	<b>-0.00265</b>	<b>0.00289</b>	<b>0.00701</b>	<b>0.00018</b>	<b>0.00423</b>
%RSD	0.06013	176.23900	0.28259	2.80049	0.66212	80.06977	17.46868	323.99351	4.86167

	Zr ppm	Pb calc	Se calc
#1	0.00136	0.00011	0.01051
#2	0.00165	-0.00124	0.00907
<b>Mean</b>	<b>0.00150</b>	<b>-0.00056</b>	<b>0.00979</b>
%RSD	13.25203	168.90829	10.36327

Method : Paragon File : 111010A  
SampleId1 : 1110088-10 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:41:15  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:07  
[SAMPLE]  
Position : TUBE133

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00098	0.02403	-0.00293	0.08878	0.01551	0.00046	-0.00630	256.03554	-0.00041
#2	-0.00070	0.02318	0.00114	0.08954	0.01565	0.00042	-0.00095	256.05151	-0.00033
<b>Mean</b>	<b>-0.00084</b>	<b>0.02360</b>	<b>-0.00089</b>	<b>0.08916</b>	<b>0.01558</b>	<b>0.00044</b>	<b>-0.00363</b>	<b>256.04352</b>	<b>-0.00037</b>
%RSD	23.94631	2.55068	321.88513	0.60149	0.63650	6.52925	104.49573	0.00441	14.42730

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00105	-0.00110	-0.00203	-0.00937	16.87282	0.02650	34.00969	0.00030	0.40477
#2	-0.00099	-0.00100	-0.00221	-0.01000	16.83028	0.02642	33.98999	0.00045	0.40559
<b>Mean</b>	<b>-0.00102</b>	<b>-0.00105</b>	<b>-0.00212</b>	<b>-0.00969</b>	<b>16.85155</b>	<b>0.02646</b>	<b>33.99984</b>	<b>0.00038</b>	<b>0.40518</b>
%RSD	4.26130	6.74090	6.07797	4.54638	0.17850	0.20847	0.04096	29.27081	0.14241

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
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#1	46.94982	-0.00095	0.41085	-0.00116	-0.00093	258.26272	0.00098	0.00585	0.00976
#2	46.78931	-0.00101	0.41293	-0.00254	-0.00066	258.56885	-0.00068	0.00542	0.01012
<b>Mean</b>	<b>46.86957</b>	<b>-0.00098</b>	<b>0.41189</b>	<b>-0.00185</b>	<b>-0.00080</b>	<b>258.41579</b>	<b>0.00015</b>	<b>0.00564</b>	<b>0.00994</b>
%RSD	0.24215	4.29093	0.35719	52.60835	23.95688	0.08377	764.83078	5.47847	2.58265

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	9.18254	0.02166	2.07382	-0.02873	-0.00269	0.00497	-0.02501	-0.00030	-0.00028
#2	9.17241	0.01809	2.07684	-0.03056	-0.00293	0.00052	-0.01059	-0.00030	0.00001
<b>Mean</b>	<b>9.17747</b>	<b>0.01988</b>	<b>2.07533</b>	<b>-0.02965</b>	<b>-0.00281</b>	<b>0.00274</b>	<b>-0.01780</b>	<b>-0.00030</b>	<b>-0.00013</b>
%RSD	0.07803	12.71589	0.10301	4.36764	6.25169	114.83840	57.29890	0.02843	155.31687

	Zr ppm	Pb calc	Se calc
#1	0.00069	-0.00101	0.00846
#2	0.00084	-0.00129	0.00855
<b>Mean</b>	<b>0.00077</b>	<b>-0.00115</b>	<b>0.00850</b>
%RSD	14.21065	17.17550	0.80411

Method : Paragon File : 111010A  
SampleId1 : 1110088-11 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:43:07  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:08  
[SAMPLE]  
Position : TUBE134

# Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00000	0.01791	-0.00085	0.08823	0.01544	0.00035	-0.00565	250.69693	-0.00059
#2	-0.00040	0.01900	0.00105	0.08733	0.01544	0.00035	-0.00403	251.89166	-0.00035
<b>Mean</b>	<b>-0.00020</b>	<b>0.01846</b>	<b>0.00010</b>	<b>0.08778</b>	<b>0.01544</b>	<b>0.00035</b>	<b>-0.00484</b>	<b>251.29429</b>	<b>-0.00047</b>
%RSD	141.35169	4.19852	1342.06347	0.72201	0.00000	1.12648	23.74677	0.33618	36.83209

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00081	-0.00143	-0.00203	-0.00958	16.69640	0.02633	33.58315	0.00030	0.40015
#2	-0.00075	-0.00079	-0.00178	-0.01021	16.74591	0.02639	33.77671	0.00038	0.40096
<b>Mean</b>	<b>-0.00078</b>	<b>-0.00111</b>	<b>-0.00191</b>	<b>-0.00989</b>	<b>16.72116</b>	<b>0.02636</b>	<b>33.67993</b>	<b>0.00034</b>	<b>0.40055</b>
%RSD	5.52455	41.06783	9.24255	4.45098	0.20933	0.14725	0.40639	16.32482	0.14404

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	46.81569	-0.00113	0.41941	-0.00226	0.00030	254.81152	-0.00050	0.00698	0.00743
#2	47.01678	-0.00095	0.42611	-0.00171	-0.00165	255.66154	-0.00027	0.01147	0.00590
<b>Mean</b>	<b>46.91624</b>	<b>-0.00104</b>	<b>0.42276</b>	<b>-0.00198</b>	<b>-0.00068</b>	<b>255.23653</b>	<b>-0.00039</b>	<b>0.00922</b>	<b>0.00667</b>
%RSD	0.30308	12.13631	1.12143	19.44557	203.17832	0.23549	40.85391	34.42903	16.18386

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	9.04318	-0.00121	2.06231	-0.02523	-0.00265	-0.00049	-0.02040	-0.00009	0.00088

#2	9.10837	-0.00622	2.07114	-0.02582	-0.00265	0.00115	-0.01117	-0.00048	0.00059
<b>Mean</b>	<b>9.07578</b>	<b>-0.00372</b>	<b>2.06673</b>	<b>-0.02552</b>	<b>-0.00265</b>	<b>0.00033</b>	<b>-0.01578</b>	<b>-0.00028</b>	<b>0.00074</b>
%RSD	0.50796	95.23163	0.30194	1.64073	0.00000	351.91060	41.36479	97.17890	27.78714

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00032	-0.00055	0.00728
#2	0.00040	-0.00167	0.00776
<b>Mean</b>	<b>0.00036</b>	<b>-0.00111</b>	<b>0.00752</b>
%RSD	16.57639	71.02849	4.49076

Method : Paragon File : 111010A  
SampleId1 : 1110088-12 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:44:58  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:08  
[SAMPLE]

Position : TUBE135

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00032	0.01859	0.00275	0.08954	0.02197	0.00033	-0.00301	280.40882	-0.00024
#2	-0.00008	0.01952	-0.00085	0.08913	0.02197	0.00035	-0.00350	279.62598	-0.00018
<b>Mean</b>	<b>0.00012</b>	<b>0.01905</b>	<b>0.00095</b>	<b>0.08933</b>	<b>0.02197</b>	<b>0.00034</b>	<b>-0.00325</b>	<b>280.01740</b>	<b>-0.00021</b>
%RSD	228.98695	3.43244	267.26158	0.32745	0.00000	2.80343	10.60470	0.19768	19.92685

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00005	-0.00002	0.00559	0.00869	15.96365	0.02662	34.63415	0.00560	0.41463
#2	-0.00080	-0.00027	0.00490	0.00775	16.06672	0.02676	34.77542	0.00545	0.41232
<b>Mean</b>	<b>-0.00037</b>	<b>-0.00015</b>	<b>0.00524</b>	<b>0.00822</b>	<b>16.01518</b>	<b>0.02669</b>	<b>34.70479</b>	<b>0.00553</b>	<b>0.41347</b>
%RSD	160.93910	117.69673	9.25817	8.03714	0.45506	0.37502	0.28783	1.99667	0.39541

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	47.59693	0.00051	8.34403	0.00148	-0.00169	262.15155	0.00084	0.01132	0.00751
#2	47.84441	-0.00086	8.33194	-0.00105	0.00131	263.02832	0.00126	0.00919	0.01099
<b>Mean</b>	<b>47.72067</b>	<b>-0.00018</b>	<b>8.33798</b>	<b>0.00022</b>	<b>-0.00019</b>	<b>262.58994</b>	<b>0.00105</b>	<b>0.01025</b>	<b>0.00925</b>
%RSD	0.36671	545.92461	0.10255	816.56759	1098.68352	0.23610	28.83874	14.67020	26.66127

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	9.20296	-0.00050	2.20126	-0.02375	-0.00257	-0.00225	0.08057	0.00048	0.01425
#2	9.24600	0.00200	2.20947	-0.02986	-0.00268	0.00076	0.08345	0.00037	0.01454
<b>Mean</b>	<b>9.22448</b>	<b>0.00075</b>	<b>2.20536</b>	<b>-0.02681</b>	<b>-0.00263</b>	<b>-0.00074</b>	<b>0.08201</b>	<b>0.00043</b>	<b>0.01440</b>
%RSD	0.32987	235.17835	0.26304	16.13122	2.76837	286.15211	2.48821	17.57173	1.42728

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00101	-0.00063	0.00877
#2	0.00104	0.00052	0.01039

Mean 0.00102 -0.00006 0.00958UNDGREEN  
 %RSD 2.36115 1468.53620 11.93692

Method : Paragon File : 111010A  
 SampleId1 : 1110088-13 5X SampleId2 :  
 Analysis commenced : 10/10/2011 18:46:51  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:08  
 [SAMPLE]  
 Position : TUBE136

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00029	0.01317	0.00123	0.01309	0.00317	0.00018	-0.00370	8.83869	0.00001
#2	0.00004	0.01238	0.00294	0.01343	0.00314	0.00014	-0.00224	8.81761	-0.00051
Mean	0.00016	0.01278	0.00209	0.01326	0.00315	0.00016	-0.00297	8.82815	-0.00025
%RSD	105.61585	4.32970	57.71383	1.83791	0.78640	18.74952	34.73162	0.16884	148.17755

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.00033	0.00143	-0.00144	-0.00159	85.44488	0.01315	1.31625	-0.00040	-0.00090
#2	0.00008	0.00100	-0.00178	-0.00117	85.18095	0.01312	1.31295	-0.00025	0.00060
Mean	0.00021	0.00121	-0.00161	-0.00138	85.31291	0.01313	1.31460	-0.00033	-0.00015
%RSD	83.28741	25.24196	15.06847	21.24155	0.21875	0.15557	0.17731	33.92606	706.14675

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	11.23430	0.00086	41.89694	0.00257	-0.00380	6.31481	-0.00182	0.00474	-0.00150
#2	11.19383	0.00018	41.82375	0.00277	-0.00236	6.23850	-0.00269	0.00665	-0.00179
Mean	11.21407	0.00052	41.86034	0.00267	-0.00308	6.27666	-0.00225	0.00569	-0.00165
%RSD	0.25522	92.71243	0.12363	5.22650	33.19855	0.85967	27.37876	23.67494	12.45513

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	2.91707	-0.00193	0.06708	-0.00611	-0.00196	0.00288	-0.01290	0.00150	0.00059
#2	2.91632	0.00129	0.06710	-0.00707	-0.00204	0.00580	-0.01117	0.00076	-0.00231
Mean	2.91670	-0.00032	0.06709	-0.00659	-0.00200	0.00434	-0.01204	0.00113	-0.00086
%RSD	0.01818	709.29619	0.02029	10.27831	3.02819	47.48136	10.16653	46.34066	239.27127

	Zr ppm	Pb calc	Se calc
#1	0.00073	-0.00168	0.00058
#2	0.00054	-0.00065	0.00102
Mean	0.00063	-0.00117	0.00080
%RSD	21.68572	62.47270	39.18106

Method : Paragon File : 111010A  
 SampleId1 : 1110088-14 5X SampleId2 :  
 Analysis commenced : 10/10/2011 18:48:44  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:08  
 [SAMPLE]  
 Position : TUBE137

Final concentrations38:23 User: MIKE LUNDGREEN

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00016	0.01251	0.00294	0.01371	0.00289	0.00015	-0.00175	7.60615	0.00009
#2	-0.00084	0.01197	0.00123	0.01357	0.00292	0.00017	-0.00468	7.65007	-0.00037
Mean	-0.00050	0.01224	0.00209	0.01364	0.00291	0.00016	-0.00322	7.62811	-0.00014
%RSD	96.84024	3.15342	57.71383	0.71473	0.85279	9.69966	64.29306	0.40716	228.63243
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00076	0.00032	-0.00162	0.30345	86.16323	0.01356	1.31213	0.00014	-0.00035
#2	-0.00058	0.00078	-0.00221	0.30563	86.65525	0.01364	1.32037	0.00014	-0.00103
Mean	-0.00067	0.00055	-0.00191	0.30454	86.40924	0.01360	1.31625	0.00014	-0.00069
%RSD	19.12720	59.36308	21.99301	0.50740	0.40263	0.37551	0.44273	0.00000	69.30356
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	11.73072	-0.00039	42.68922	0.00000	0.00010	6.57608	-0.00136	-0.00067	-0.00050
#2	11.81902	-0.00208	43.06656	0.00184	-0.00120	6.65829	-0.00092	-0.00045	-0.00478
Mean	11.77487	-0.00123	42.87789	0.00092	-0.00055	6.61718	-0.00114	-0.00056	-0.00264
%RSD	0.53029	97.21858	0.62228	141.78486	167.28505	0.87850	26.95941	27.84795	114.75038
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	3.00402	0.00057	0.06324	-0.00661	-0.00209	-0.00044	-0.00676	0.00050	-0.00057
#2	3.03406	-0.00121	0.06373	-0.01069	-0.00219	0.00556	-0.01138	0.00061	0.00030
Mean	3.01904	-0.00032	0.06348	-0.00865	-0.00214	0.00256	-0.00907	0.00055	-0.00013
%RSD	0.70343	394.20735	0.54680	33.37773	3.40080	165.98614	35.98916	13.54816	465.95259
	Zr ppm	Pb calc	Se calc						
#1	0.00047	0.00007	-0.00056						
#2	0.00051	-0.00019	-0.00334						
Mean	0.00049	-0.00006	-0.00195						
%RSD	6.64255	295.51515	101.12176						

Method : Paragon File : 111010A  
SampleId1 : 1110088-15 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:50:37  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:08  
[SAMPLE]  
Position : TUBE138

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00035	0.00133	0.00029	0.08844	0.01351	0.00024	-0.00111	240.32635	-0.00005
#2	-0.00005	-0.00078	0.00001	0.08685	0.01351	0.00020	-0.00046	241.22355	-0.00055
Mean	-0.00020	0.00027	0.00015	0.08764	0.01351	0.00022	-0.00078	240.77495	-0.00030
%RSD	104.78839	543.13802	136.53256	1.27942	0.00000	13.22374	58.71241	0.26349	117.61749

ted: 10/11/2011 11:38:23 User: MIKE LUNDGREEN

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00093	-0.00086	-0.00127	-0.00823	25.59675	0.02647	33.15712	0.00163	0.39138
#2	-0.00069	-0.00073	-0.00084	-0.00813	25.47721	0.02635	33.12194	0.00163	0.39104
<b>Mean</b>	<b>-0.00081</b>	<b>-0.00080</b>	<b>-0.00105</b>	<b>-0.00818</b>	<b>25.53698</b>	<b>0.02641</b>	<b>33.13953</b>	<b>0.00163</b>	<b>0.39121</b>
%RSD	21.23644	12.02010	28.78106	0.89714	0.33100	0.32491	0.07507	0.00000	0.06145

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	46.89520	0.00089	0.37664	0.00004	-0.00148	251.44239	-0.00013	0.01393	0.00867
#2	46.69945	0.00024	0.38149	-0.00062	0.00113	251.57083	-0.00114	0.01135	0.00656
<b>Mean</b>	<b>46.79732</b>	<b>0.00057</b>	<b>0.37907</b>	<b>-0.00029</b>	<b>-0.00017</b>	<b>251.50661</b>	<b>-0.00063</b>	<b>0.01264</b>	<b>0.00761</b>
%RSD	0.29578	81.69569	0.90543	162.17558	1060.99956	0.03611	111.96178	14.42382	19.57157

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	9.10780	-0.00300	1.96661	-0.02663	-0.00252	0.00151	-0.01694	0.00034	0.00205
#2	9.11693	-0.00014	1.96810	-0.02926	-0.00275	0.00497	-0.01751	0.00048	0.00263
<b>Mean</b>	<b>9.11236</b>	<b>-0.00157</b>	<b>1.96736</b>	<b>-0.02795</b>	<b>-0.00263</b>	<b>0.00324</b>	<b>-0.01723</b>	<b>0.00041</b>	<b>0.00234</b>
%RSD	0.07084	128.71695	0.05346	6.66867	5.97862	75.41493	2.36881	24.59225	17.57951

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00043	-0.00097	0.01042
#2	0.00041	0.00055	0.00816
<b>Mean</b>	<b>0.00042</b>	<b>-0.00021</b>	<b>0.00929</b>
%RSD	3.24686	507.58792	17.23841

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:09

SampleId1 : 1110088-16 2X

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 18:52:30

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE139

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00049	0.00530	0.00123	0.08582	0.01344	0.00028	-0.00371	238.40386	-0.00011
#2	-0.00077	0.00582	0.00294	0.08547	0.01344	0.00025	-0.00614	238.95555	-0.00050
<b>Mean</b>	<b>-0.00063</b>	<b>0.00556</b>	<b>0.00209</b>	<b>0.08564</b>	<b>0.01344</b>	<b>0.00026</b>	<b>-0.00492</b>	<b>238.67971</b>	<b>-0.00030</b>
%RSD	32.22365	6.62296	57.71383	0.28463	0.00000	7.24385	34.99412	0.16344	90.90984

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00075	-0.00097	-0.00117	-0.00854	25.39965	0.02626	32.92509	0.00147	0.38655
#2	-0.00129	-0.00139	-0.00117	-0.00834	25.39517	0.02628	32.94728	0.00147	0.38886
<b>Mean</b>	<b>-0.00102</b>	<b>-0.00118</b>	<b>-0.00117</b>	<b>-0.00844</b>	<b>25.39741</b>	<b>0.02627</b>	<b>32.93619</b>	<b>0.00147</b>	<b>0.38770</b>
%RSD	37.77782	25.52821	0.51473	1.73911	0.01247	0.05442	0.04765	0.00000	0.42162



	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	46.40493	-0.00056	0.36624	-0.00177	-0.00059	249.98270	-0.00206	0.01471	0.00714
#2	46.42493	-0.00015	0.37271	-0.00350	0.00044	249.89473	-0.00004	0.01190	0.00714
<b>Mean</b>	<b>46.41493</b>	<b>-0.00036</b>	<b>0.36948</b>	<b>-0.00264</b>	<b>-0.00008</b>	<b>249.93871</b>	<b>-0.00105</b>	<b>0.01330</b>	<b>0.00714</b>
%RSD	0.03047	82.78438	1.23852	46.26519	961.27232	0.02489	136.45012	14.94257	0.00205

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	9.05106	0.00343	1.95448	-0.03194	-0.00276	0.00706	-0.02502	-0.00002	-0.00028
#2	9.07619	0.00057	1.95705	-0.03379	-0.00285	0.00005	-0.03598	-0.00002	0.00088
<b>Mean</b>	<b>9.06363</b>	<b>0.00200</b>	<b>1.95577</b>	<b>-0.03287</b>	<b>-0.00281</b>	<b>0.00355</b>	<b>-0.03050</b>	<b>-0.00002</b>	<b>0.00030</b>
%RSD	0.19606	100.91531	0.09290	3.98745	2.15905	139.58662	25.41928	0.16171	270.73139

	Zr ppm	Pb calc	Se calc
#1	0.00029	-0.00099	0.00966
#2	0.00053	-0.00087	0.00872
<b>Mean</b>	<b>0.00041</b>	<b>-0.00093</b>	<b>0.00919</b>
%RSD	41.58249	8.82935	7.19939

Method : Paragon File : 111010A  
SampleId1 : 1110088-17 2X SampleId2 :  
Analysis commenced : 10/10/2011 18:54:24  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:09  
[SAMPLE]  
Position : TUBE140

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00045	0.01469	0.00133	0.08954	0.01376	0.00031	-0.00111	240.75260	-0.00023
#2	-0.00009	0.00732	0.00568	0.08692	0.01358	0.00030	-0.00144	242.31724	-0.00050
<b>Mean</b>	<b>-0.00027</b>	<b>0.01101</b>	<b>0.00350</b>	<b>0.08823</b>	<b>0.01367</b>	<b>0.00030</b>	<b>-0.00127</b>	<b>241.53492</b>	<b>-0.00036</b>
%RSD	91.85195	47.39899	87.78416	2.09978	0.90683	1.13049	18.32571	0.45806	52.47131

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00014	-0.00035	-0.00118	-0.00771	25.64721	0.02653	33.24383	0.00139	0.39233
#2	-0.00038	-0.00053	-0.00203	-0.00792	25.66655	0.02657	33.30121	0.00131	0.39280
<b>Mean</b>	<b>-0.00026</b>	<b>-0.00044</b>	<b>-0.00160</b>	<b>-0.00782</b>	<b>25.65688</b>	<b>0.02655</b>	<b>33.27252</b>	<b>0.00135</b>	<b>0.39257</b>
%RSD	65.25307	29.30543	37.34108	1.87766	0.05329	0.09234	0.12196	4.07994	0.08573

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	46.76287	0.00068	0.35376	-0.00008	-0.00271	252.28298	0.00265	0.01281	0.00779
#2	46.80345	-0.00080	0.35122	-0.00029	0.00019	253.01386	-0.00046	0.01123	0.00700
<b>Mean</b>	<b>46.78316</b>	<b>-0.00006</b>	<b>0.35249</b>	<b>-0.00018</b>	<b>-0.00126</b>	<b>252.64842</b>	<b>0.00110</b>	<b>0.01202</b>	<b>0.00740</b>
%RSD	0.06134	1805.57104	0.50996	82.66970	162.62803	0.20456	200.36649	9.28002	7.64138

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	9.12356	0.00343	1.96949	-0.03434	-0.00273	0.00525	-0.01636	0.00083	-0.00028
#2	9.15575	-0.00193	1.97049	-0.03105	-0.00280	0.00515	-0.02675	-0.00023	-0.00028
<b>Mean</b>	<b>9.13966</b>	<b>0.00075</b>	<b>1.96999</b>	<b>-0.03270</b>	<b>-0.00276</b>	<b>0.00520</b>	<b>-0.02155</b>	<b>0.00030</b>	<b>-0.00028</b>
%RSD	0.24904	503.80928	0.03596	7.10935	1.75402	1.31304	34.07253	249.43107	0.00000

	Zr ppm	Pb calc	Se calc
#1	0.00095	-0.00184	0.00946
#2	0.00062	0.00003	0.00841
<b>Mean</b>	<b>0.00079</b>	<b>-0.00090</b>	<b>0.00894</b>
%RSD	29.86233	146.22905	8.37545

Method : Paragon File : 111010A  
SampleId1 : CCV SampleId2 :  
Analysis commenced : 10/10/2011 18:56:17  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:09  
[CV]

Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19266	52.07379	0.50569	0.98266	0.95772	0.47742	0.51305	50.72650	0.49479
#2	0.19412	52.42273	0.51168	0.99055	0.97002	0.48077	0.53258	50.95201	0.49880
<b>Mean</b>	<b>0.19339</b>	<b>52.24826</b>	<b>0.50868</b>	<b>0.98660</b>	<b>0.96387</b>	<b>0.47910</b>	<b>0.52282</b>	<b>50.83926</b>	<b>0.49679</b>
%RSD	0.53400	0.47224	0.83267	0.56522	0.90222	0.49471	2.64238	0.31366	0.56972

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.48023	0.95363	1.01978	19.90631	47.91032	0.48550	51.05654	0.94695	0.96561
#2	0.48316	0.95802	1.03020	20.04711	48.27320	0.49030	51.40059	0.95360	0.97401
<b>Mean</b>	<b>0.48169</b>	<b>0.95583</b>	<b>1.02499</b>	<b>19.97671</b>	<b>48.09176</b>	<b>0.48790</b>	<b>51.22856</b>	<b>0.95028</b>	<b>0.96981</b>
%RSD	0.42955	0.32501	0.71903	0.49837	0.53355	0.69555	0.47490	0.49471	0.61218

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	48.40768	0.97033	5.07227	0.97655	0.96525	5.21192	0.47388	0.99987	0.99887
#2	48.69831	0.97802	5.10125	0.98271	0.96188	5.28814	0.48014	1.01493	0.99831
<b>Mean</b>	<b>48.55299</b>	<b>0.97417</b>	<b>5.08676</b>	<b>0.97963</b>	<b>0.96356</b>	<b>5.25003</b>	<b>0.47701</b>	<b>1.00740</b>	<b>0.99859</b>
%RSD	0.42326	0.55870	0.40284	0.44411	0.24768	1.02657	0.92787	1.05689	0.03965

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.82372	1.04364	0.47660	0.34584	0.47748	0.51626	4.70234	0.47546	0.98781
#2	4.86071	1.05368	0.48217	0.35117	0.48215	0.52325	4.74622	0.47889	0.99541
<b>Mean</b>	<b>4.84222</b>	<b>1.04866</b>	<b>0.47939</b>	<b>0.34850</b>	<b>0.47981</b>	<b>0.51976</b>	<b>4.72428</b>	<b>0.47718</b>	<b>0.99161</b>
%RSD	0.54016	0.67671	0.82137	1.08057	0.68781	0.95149	0.65676	0.50765	0.54233

	Zr ppm	Pb calc	Se calc
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#1	0.97828	0.96901	0.99920	UNDGREEN
#2	0.98700	0.96881	1.00384	
Mean	0.98264	0.96891	1.00152	
%RSD	0.62727	0.01476	0.32764	

Method : Paragon File : 111010A  
SampleId1 : CCB SampleId2 :  
Analysis commenced : 10/10/2011 18:58:13  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:09  
[CB]

Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00020	0.07228	0.00350	-0.00242	0.00005	0.00067	-0.00094	0.05606	0.00008
#2	-0.00026	0.06435	0.00331	-0.00311	-0.00009	0.00057	-0.00630	0.03838	0.00014
Mean	-0.00023	0.06832	0.00341	-0.00277	-0.00002	0.00062	-0.00362	0.04722	0.00011
%RSD	17.85792	8.20744	3.92259	17.62096	486.61366	11.84085	104.51625	26.47667	34.34934

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00010	-0.00005	-0.00178	0.02125	-0.05174	0.00394	0.01458	0.00038	0.00005
#2	-0.00028	-0.00017	-0.00153	0.01845	-0.06032	0.00389	0.00634	0.00038	-0.00015
Mean	-0.00019	-0.00011	-0.00165	0.01985	-0.05603	0.00392	0.01046	0.00038	-0.00005
%RSD	66.14123	74.51556	10.46958	9.98691	10.83116	0.78245	55.67742	0.00000	301.74498

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.02993	-0.00027	0.00839	0.00116	-0.00009	0.00684	-0.00202	0.00092	-0.00056
#2	-0.03683	0.00036	-0.00268	-0.00096	-0.00151	-0.00190	0.00010	0.00183	-0.00208
Mean	-0.03338	0.00005	0.00285	0.00010	-0.00080	0.00247	-0.00096	0.00138	-0.00132
%RSD	14.62931	963.08280	274.35642	1470.43633	126.09676	250.47036	155.59349	46.67826	81.87893

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	-0.01699	0.00164	-0.00238	-0.00128	-0.00120	0.00426	-0.01984	-0.00001	-0.00028
#2	-0.01497	-0.00479	-0.00254	0.00055	-0.00140	0.00372	-0.00484	-0.00008	-0.00057
Mean	-0.01598	-0.00157	-0.00246	-0.00037	-0.00130	0.00399	-0.01234	-0.00005	-0.00042
%RSD	8.90180	289.29367	4.69597	352.61435	10.69911	9.55470	85.97194	106.10250	48.58942

	Zr ppm	Pb calc	Se calc
#1	0.00180	0.00033	-0.00006
#2	0.00155	-0.00133	-0.00078
Mean	0.00168	-0.00050	-0.00042
%RSD	10.82711	234.35401	120.24411

Method : Paragon File : 111010A  
SampleId1 : 1110088-18 2X SampleId2 :  
Analysis commenced : 10/10/2011 19:00:12

Printed : 10/11/2011 11:38:09  
[SAMPLE]

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE141

## Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00061	0.02040	-0.00075	0.08871	0.01446	0.00048	0.00020	248.92767	-0.00023
#2	0.00026	0.02647	0.00246	0.08671	0.01436	0.00042	-0.00142	248.83731	0.00000
Mean	-0.00018	0.02343	0.00086	0.08771	0.01441	0.00045	-0.00061	248.88249	-0.00011
%RSD	350.23926	18.31198	265.54142	1.61191	0.51629	9.28386	186.99917	0.02567	145.85915

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00032	-0.00069	-0.00129	-0.00730	25.46966	0.02645	32.70774	0.00092	0.39362
#2	0.00010	0.00004	-0.00146	-0.00730	25.33341	0.02634	32.64408	0.00100	0.39498
Mean	-0.00011	-0.00033	-0.00137	-0.00730	25.40154	0.02639	32.67591	0.00096	0.39430
%RSD	270.71771	157.27140	9.12484	0.00000	0.37928	0.29410	0.13774	5.73420	0.24387

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	46.44754	0.00006	0.11912	-0.00299	0.00203	250.17699	-0.00034	0.01810	0.00532
#2	46.26028	0.00060	0.12328	0.00092	-0.00232	249.12156	0.00100	0.00925	0.00670
Mean	46.35391	0.00033	0.12120	-0.00103	-0.00014	249.64927	0.00033	0.01367	0.00601
%RSD	0.28565	115.26998	2.42353	267.19865	2137.33659	0.29894	285.22138	45.75881	16.23006

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	9.02105	0.00093	1.99367	-0.02390	-0.00251	0.00253	0.00845	0.00062	0.00030
#2	9.01452	0.00129	1.98855	-0.03144	-0.00252	0.00326	0.01653	0.00055	-0.00086
Mean	9.01778	0.00111	1.99111	-0.02767	-0.00252	0.00290	0.01249	0.00058	-0.00028
%RSD	0.05118	22.77805	0.18158	19.28884	0.24051	17.89553	45.73642	8.56696	296.08845

	Zr ppm	Pb calc	Se calc
#1	0.00172	0.00036	0.00958
#2	0.00224	-0.00124	0.00755
Mean	0.00198	-0.00044	0.00856
%RSD	18.49822	256.79023	16.72496

Method : Paragon File : 111010A

SampleId1 : 1110088-19 2X SampleId2 :

Analysis commenced : 10/10/2011 19:02:06

Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:10

[SAMPLE]

Position : TUBE142

## Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00075	0.02940	-0.00056	0.08720	0.01422	0.00045	0.00117	246.53524	-0.00075
#2	-0.00090	0.02851	0.00048	0.08651	0.01418	0.00043	-0.00338	246.71457	-0.00038

<b>Mean</b>	<b>-0.00083</b>	<b>0.02895</b>	<b>-0.00004</b>	<b>0.08685</b>	<b>0.01420</b>	<b>0.00044</b>	<b>-0.00110</b>	<b>246.62490</b>	<b>-0.00056</b>
<b>%RSD</b>	<b>12.34345</b>	<b>2.16232</b>	<b>1742.91289</b>	<b>0.56134</b>	<b>0.17465</b>	<b>3.01346</b>	<b>290.95160</b>	<b>0.05142</b>	<b>46.54525</b>
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00087	-0.00117	-0.00196	-0.00844	25.40224	0.02631	32.55029	0.00092	0.39450
#2	-0.00105	-0.00114	-0.00171	-0.00896	25.44255	0.02639	32.55950	0.00077	0.39260
<b>Mean</b>	<b>-0.00096</b>	<b>-0.00116</b>	<b>-0.00184</b>	<b>-0.00870</b>	<b>25.42240</b>	<b>0.02635</b>	<b>32.55489</b>	<b>0.00085</b>	<b>0.39355</b>
<b>%RSD</b>	<b>13.40687</b>	<b>1.72631</b>	<b>9.95546</b>	<b>4.21809</b>	<b>0.11212</b>	<b>0.22485</b>	<b>0.02001</b>	<b>13.05658</b>	<b>0.34207</b>
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	46.21527	-0.00059	0.12605	-0.00244	-0.00050	248.48796	0.00123	0.01372	0.00794
#2	46.23616	-0.00053	0.11728	-0.00398	0.00003	249.02631	0.00021	0.00823	0.00954
<b>Mean</b>	<b>46.22571</b>	<b>-0.00056</b>	<b>0.12166</b>	<b>-0.00321</b>	<b>-0.00024</b>	<b>248.75714</b>	<b>0.00072</b>	<b>0.01097</b>	<b>0.00874</b>
<b>%RSD</b>	<b>0.03196</b>	<b>7.45965</b>	<b>5.09695</b>	<b>33.85397</b>	<b>156.94883</b>	<b>0.15303</b>	<b>99.45252</b>	<b>35.40152</b>	<b>12.93429</b>
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	8.97825	0.00057	1.98880	-0.02558	-0.00252	0.00307	0.00153	-0.00016	-0.00115
#2	8.98748	0.00022	1.99431	-0.02189	-0.00249	0.00289	-0.00078	-0.00079	-0.00028
<b>Mean</b>	<b>8.98286</b>	<b>0.00039</b>	<b>1.99155</b>	<b>-0.02374</b>	<b>-0.00251</b>	<b>0.00298</b>	<b>0.00037</b>	<b>-0.00048</b>	<b>-0.00071</b>
<b>%RSD</b>	<b>0.07267</b>	<b>64.03443</b>	<b>0.19556</b>	<b>10.99210</b>	<b>0.96696</b>	<b>4.34735</b>	<b>437.50457</b>	<b>94.29642</b>	<b>86.39863</b>
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00092	-0.00115	0.00986						
#2	0.00055	-0.00131	0.00910						
<b>Mean</b>	<b>0.00074</b>	<b>-0.00123</b>	<b>0.00948</b>						
<b>%RSD</b>	<b>35.03784</b>	<b>9.13096</b>	<b>5.69150</b>						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:10

SampleId1 : 1110088-20 2X

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 19:04:01

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE143

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00071	0.02791	0.00086	0.08816	0.01408	0.00041	-0.00224	245.32370	-0.00079
#2	-0.00060	0.02576	0.00057	0.08644	0.01418	0.00041	-0.00370	244.00525	-0.00046
<b>Mean</b>	<b>-0.00065</b>	<b>0.02684</b>	<b>0.00071</b>	<b>0.08730</b>	<b>0.01413</b>	<b>0.00041</b>	<b>-0.00297</b>	<b>244.66448</b>	<b>-0.00063</b>
<b>%RSD</b>	<b>11.94450</b>	<b>5.65691</b>	<b>28.08326</b>	<b>1.39616</b>	<b>0.52654</b>	<b>0.07047</b>	<b>34.85853</b>	<b>0.38104</b>	<b>36.93339</b>
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00032	-0.00088	-0.00180	-0.01021	25.60028	0.02645	32.50883	0.00139	0.39246
#2	-0.00111	-0.00116	-0.00153	-0.01072	25.63471	0.02651	32.55615	0.00139	0.39151
<b>Mean</b>	<b>-0.00072</b>	<b>-0.00102</b>	<b>-0.00166</b>	<b>-0.01046</b>	<b>25.61750</b>	<b>0.02648</b>	<b>32.53249</b>	<b>0.00139</b>	<b>0.39199</b>

%RSD	77.69626	19.93443	11.48009	3.50679	0.09503	0.15430	0.10284	0.00000	0.17172
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	46.42753	0.00027	0.12582	-0.00225	-0.00012	247.37164	0.00099	0.00476	0.00699
#2	46.51613	-0.00033	0.11174	-0.00284	0.00106	247.60947	0.00121	0.01013	0.01114
<b>Mean</b>	<b>46.47183</b>	<b>-0.00003</b>	<b>0.11878</b>	<b>-0.00255</b>	<b>0.00047</b>	<b>247.49055</b>	<b>0.00110</b>	<b>0.00744</b>	<b>0.00907</b>
%RSD	0.13481	1475.97471	8.38051	16.25194	178.72396	0.06795	13.99659	50.98354	32.30680
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	8.95226	0.00272	1.99782	-0.02938	-0.00271	-0.00193	0.00788	0.00002	0.00001
#2	8.96402	-0.00372	1.99993	-0.03020	-0.00281	0.00734	-0.00943	-0.00037	0.00088
<b>Mean</b>	<b>8.95814</b>	<b>-0.00050</b>	<b>1.99887</b>	<b>-0.02979</b>	<b>-0.00276</b>	<b>0.00271</b>	<b>-0.00078</b>	<b>-0.00018</b>	<b>0.00045</b>
%RSD	0.09281	912.54472	0.07451	1.92917	2.41552	242.39573	1569.58551	155.30581	137.32605
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00074	-0.00083	0.00625						
#2	0.00071	-0.00024	0.01080						
<b>Mean</b>	<b>0.00072</b>	<b>-0.00054</b>	<b>0.00852</b>						
%RSD	3.09522	78.06975	37.73625						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:10

SampleId1 : IP1110110-3MB

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 19:05:57

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE144

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00000	0.02429	-0.00151	-0.00352	-0.00100	0.00029	0.00051	0.00328	-0.00057
#2	-0.00021	0.02375	-0.00321	-0.00290	-0.00097	0.00025	0.00084	0.00484	-0.00032
<b>Mean</b>	<b>-0.00010</b>	<b>0.02402</b>	<b>-0.00236</b>	<b>-0.00321</b>	<b>-0.00098</b>	<b>0.00027</b>	<b>0.00068</b>	<b>0.00406</b>	<b>-0.00044</b>
%RSD	140.49268	1.61535	51.02074	13.64813	2.51806	11.40377	34.33931	27.17478	40.12938
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00089	-0.00100	-0.00289	-0.00678	-0.12287	0.00357	-0.03689	-0.00072	-0.00191
#2	-0.00053	-0.00060	-0.00247	-0.00543	-0.11700	0.00358	-0.03442	-0.00072	-0.00205
<b>Mean</b>	<b>-0.00071</b>	<b>-0.00080</b>	<b>-0.00268</b>	<b>-0.00611</b>	<b>-0.11994</b>	<b>0.00358</b>	<b>-0.03566</b>	<b>-0.00072</b>	<b>-0.00198</b>
%RSD	36.27186	35.41079	11.07338	15.62882	3.46148	0.22846	4.89909	0.00000	4.84266
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.06517	-0.00297	-0.00614	-0.00295	-0.00239	0.01267	-0.00236	-0.00311	0.00024
#2	-0.06541	-0.00122	0.00055	-0.00206	-0.00243	0.01558	-0.00214	-0.00635	0.00264
<b>Mean</b>	<b>-0.06529</b>	<b>-0.00209</b>	<b>-0.00280</b>	<b>-0.00251</b>	<b>-0.00241</b>	<b>0.01412</b>	<b>-0.00225</b>	<b>-0.00473</b>	<b>0.00144</b>
%RSD	0.25960	59.21125	169.06571	25.23753	1.32076	14.58887	6.82930	48.47105	117.95810

ted: 10/11/2011 11:38:23 User: MIKE LUNDGREEN

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.02149	0.00379	-0.00288	0.00019	-0.00184	0.00807	-0.01925	-0.00065	0.00147
#2	-0.01990	-0.00050	-0.00284	-0.00069	-0.00194	-0.00030	-0.00886	-0.00026	0.00088
Mean	-0.02070	0.00165	-0.00286	-0.00025	-0.00189	0.00388	-0.01405	-0.00046	0.00118
%RSD	5.43363	184.36190	0.95078	250.30118	3.84806	152.38431	52.25160	59.93849	34.96445

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00026	-0.00258	-0.00088
#2	0.00059	-0.00231	-0.00036
Mean	0.00043	-0.00244	-0.00062
%RSD	55.71402	7.75488	59.65879

Method : Paragon File : 111010A  
 SampleId1 : IP1110110-3RVS SampleId2 :  
 Analysis commenced : 10/10/2011 19:07:50  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:10  
 [SAMPLE]

Position : TUBE145

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.01010	1.05454	0.05269	0.04838	0.04698	0.01029	0.10214	5.01056	0.01921
#2	0.00855	1.04313	0.04645	0.04693	0.04659	0.01022	0.10019	4.99667	0.01913
Mean	0.00933	1.04883	0.04957	0.04766	0.04678	0.01025	0.10116	5.00362	0.01917
%RSD	11.78993	0.76890	8.90776	2.14799	0.58330	0.48402	1.36640	0.19623	0.28548

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.02005	0.04851	0.04873	0.96547	7.56982	0.04191	4.99247	0.04720	0.09733
#2	0.01938	0.04755	0.04780	0.96411	7.51330	0.04162	4.97719	0.04705	0.09448
Mean	0.01971	0.04803	0.04826	0.96479	7.54156	0.04177	4.98483	0.04713	0.09590
%RSD	2.39597	1.41490	1.35554	0.09968	0.52996	0.48907	0.21668	0.23429	2.10131

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	8.10555	0.04889	1.00441	0.05203	0.04290	0.99517	0.09553	0.05009	0.04505
#2	8.03129	0.04994	0.99444	0.04849	0.04821	1.00684	0.09518	0.05355	0.05196
Mean	8.06842	0.04941	0.99943	0.05026	0.04555	1.00100	0.09535	0.05182	0.04850
%RSD	0.65080	1.48875	0.70578	4.98124	8.24496	0.82426	0.25805	4.72079	10.06820

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.26199	0.10347	0.04456	-0.00379	0.04578	0.11078	0.48158	0.04909	0.05001
#2	0.25794	0.09954	0.04419	-0.00079	0.04609	0.10376	0.46138	0.04775	0.04972
Mean	0.25997	0.10151	0.04437	-0.00229	0.04593	0.10727	0.47148	0.04842	0.04986
%RSD	1.10242	2.74000	0.58252	92.74812	0.47482	4.62660	3.02951	1.95937	0.41227

	Zr	Pb	SeUNDGREEN
	ppm	calc	calc
#1	0.04866	0.04594	0.04673
#2	0.04855	0.04830	0.05249
Mean	0.04861	0.04712	0.04961
%RSD	0.15962	3.54717	8.20805

Method : Paragon File : 111010A  
SampleId1 : IP1110110-3LCS SampleId2 :  
Analysis commenced : 10/10/2011 19:09:42  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:10  
[SAMPLE]

Position : TUBE146

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00023	2.04958	1.96681	0.48014	1.85607	0.04741	-0.00154	38.64544	0.04763
#2	0.00008	2.05720	1.94721	0.47676	1.85931	0.04746	-0.00024	38.69383	0.04818
Mean	0.00016	2.05339	1.95701	0.47845	1.85769	0.04743	-0.00089	38.66964	0.04791
%RSD	66.78530	0.26251	0.70806	0.50003	0.12328	0.07564	103.53449	0.08848	0.80695

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.46049	0.18348	0.24351	0.92092	35.38795	0.44728	39.01809	0.45562	0.92616
#2	0.45983	0.18204	0.24444	0.92071	35.41717	0.44792	39.04918	0.45680	0.92193
Mean	0.46016	0.18276	0.24398	0.92081	35.40256	0.44760	39.03363	0.45621	0.92405
%RSD	0.10236	0.55448	0.27217	0.01606	0.05836	0.10253	0.05632	0.18265	0.32376

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	35.40430	0.46896	9.81216	0.47335	0.45925	-0.00482	0.46950	2.01844	1.98354
#2	35.48901	0.46602	9.81752	0.47480	0.46003	-0.00190	0.46102	2.04160	1.99127
Mean	35.44666	0.46749	9.81484	0.47407	0.45964	-0.00336	0.46526	2.03002	1.98741
%RSD	0.16899	0.44585	0.03864	0.21622	0.11899	61.32385	1.28891	0.80673	0.27491

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.90498	0.49618	0.46114	-0.02320	0.45606	1.99732	-0.02565	0.46286	0.47940
#2	1.90883	0.49690	0.46205	-0.03024	0.45695	1.99288	-0.02276	0.46290	0.47911
Mean	1.90690	0.49654	0.46159	-0.02672	0.45650	1.99510	-0.02421	0.46288	0.47926
%RSD	0.14259	0.10181	0.14012	18.61813	0.13820	0.15724	8.42823	0.00540	0.04301

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00536	0.46395	1.99516
#2	0.00481	0.46495	2.00803
Mean	0.00508	0.46445	2.00160
%RSD	7.66069	0.15204	0.45452

Method : Paragon File : 111010A

Printed : 10/11/2011 11:38:10



SampleId1 : 1110039-1      SampleId2 :  
 Analysis commenced : 10/10/2011 19:11:33  
 Dilution ratio : 1.00000 to 1.00000      Tray :

[SAMPLE]

Position : TUBE147

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00058	0.11202	0.00502	0.10650	0.04280	0.00031	-0.00792	73.63081	-0.00079
#2	-0.00064	0.11483	0.00445	0.10802	0.04315	0.00028	-0.00143	73.56809	-0.00064
Mean	-0.00003	0.11343	0.00473	0.10726	0.04298	0.00029	-0.00467	73.59945	-0.00072
%RSD	2913.09072	1.75290	8.47639	1.00005	0.57721	8.28601	98.23497	0.06026	13.95047
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00059	-0.00019	-0.00144	0.08865	3.22857	0.02254	55.41183	0.00248	0.01301
#2	-0.00096	-0.00065	-0.00186	0.08896	3.25015	0.02264	55.55288	0.00248	0.01179
Mean	-0.00078	-0.00042	-0.00165	0.08880	3.23936	0.02259	55.48236	0.00248	0.01240
%RSD	33.08960	77.23613	18.18277	0.24814	0.47104	0.33461	0.17976	0.00000	6.96317
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	84.98630	-0.00107	0.01185	-0.00060	0.00006	84.58376	-0.00357	0.01336	0.00614
#2	85.25333	-0.00148	0.00908	0.00129	0.00211	84.79419	0.00131	0.00865	0.01050
Mean	85.11981	-0.00128	0.01046	0.00035	0.00109	84.68897	-0.00113	0.01100	0.00832
%RSD	0.22183	23.04445	18.70262	385.27699	133.22110	0.17570	306.05145	30.27062	37.04075
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	10.98003	-0.00265	0.95172	-0.04080	0.00149	0.00274	-0.01470	0.00254	0.00205
#2	11.03105	0.00593	0.95505	-0.04011	0.00155	0.00301	-0.01873	0.00272	0.00118
Mean	11.00554	0.00164	0.95339	-0.04045	0.00152	0.00287	-0.01672	0.00263	0.00161
%RSD	0.32779	369.61766	0.24715	1.20278	2.39032	6.66227	17.08737	4.74508	38.25849
	Zr ppm	Pb calc	Se calc						
#1	0.00106	-0.00016	0.00855						
#2	0.00085	0.00184	0.00989						
Mean	0.00095	0.00084	0.00922						
%RSD	15.16857	167.69392	10.27607						

Method : Paragon      File : 111010A  
 SampleId1 : 1110039-2      SampleId2 :  
 Analysis commenced : 10/10/2011 19:13:26  
 Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:38:11

[SAMPLE]

Position : TUBE148

Final concentrations

Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
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#1	-0.00029	0.00988	0.00246	0.05941	0.07354	0.00024	-0.00563	45.99428	-0.00065
#2	-0.00054	0.01088	0.00067	0.06058	0.07350	0.00022	-0.00190	46.04203	-0.00021
<b>Mean</b>	<b>-0.00042</b>	<b>0.01038</b>	<b>0.00157</b>	<b>0.06000</b>	<b>0.07352</b>	<b>0.00023</b>	<b>-0.00377</b>	<b>46.01815</b>	<b>-0.00043</b>
%RSD	42.59171	6.82112	81.16068	1.38127	0.03376	7.69419	70.12348	0.07338	72.93544

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00067	-0.00029	0.00550	-0.00211	1.72391	0.01996	40.33974	0.00022	0.00494
#2	-0.00054	-0.00059	0.00583	-0.00252	1.72345	0.01993	40.34605	0.00030	0.00453
<b>Mean</b>	<b>-0.00061</b>	<b>-0.00044</b>	<b>0.00566</b>	<b>-0.00232</b>	<b>1.72368</b>	<b>0.01994</b>	<b>40.34290</b>	<b>0.00026</b>	<b>0.00473</b>
%RSD	14.18782	47.83438	4.21491	12.67462	0.01859	0.09219	0.01105	21.22496	6.07864

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	56.38840	-0.00131	0.00931	-0.00214	-0.00019	25.35001	-0.00175	0.00675	0.00198
#2	56.38632	-0.00033	0.00631	0.00105	-0.00189	25.33802	-0.00208	0.00250	-0.00136
<b>Mean</b>	<b>56.38736</b>	<b>-0.00082</b>	<b>0.00781</b>	<b>-0.00055</b>	<b>-0.00104</b>	<b>25.34402</b>	<b>-0.00192</b>	<b>0.00462</b>	<b>0.00031</b>
%RSD	0.00260	84.98202	27.14011	411.47199	115.47565	0.03346	12.31989	65.05832	757.35418

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	13.40424	0.00486	0.77569	-0.03048	-0.00186	0.00515	-0.02271	0.00694	0.00466
#2	13.41233	-0.00193	0.77458	-0.03230	-0.00197	0.00370	-0.01694	0.00665	0.00495
<b>Mean</b>	<b>13.40828</b>	<b>0.00147</b>	<b>0.77514</b>	<b>-0.03139</b>	<b>-0.00192</b>	<b>0.00442</b>	<b>-0.01983</b>	<b>0.00680</b>	<b>0.00481</b>
%RSD	0.04265	327.47641	0.10115	4.11277	4.10360	23.23037	20.57957	2.93899	4.27398

	Zr ppm	Pb calc	Se calc
#1	-0.00025	-0.00084	0.00357
#2	0.00005	-0.00091	-0.00008
<b>Mean</b>	<b>-0.00010</b>	<b>-0.00088</b>	<b>0.00175</b>
%RSD	211.50728	5.88184	147.49777

Method : Paragon File : 111010A  
SampleId1 : 1110039-3 SampleId2 :  
Analysis commenced : 10/10/2011 19:15:18  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:11  
[SAMPLE]  
Position : TUBE149

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00078	0.25583	0.00265	-0.00042	0.01292	0.00019	0.00280	10.17327	-0.00043
#2	-0.00015	0.25497	-0.00330	0.00040	0.01281	0.00016	-0.00272	10.17248	-0.00047
<b>Mean</b>	<b>-0.00046</b>	<b>0.25540</b>	<b>-0.00033</b>	<b>-0.00001</b>	<b>0.01287</b>	<b>0.00017</b>	<b>0.00004</b>	<b>10.17288</b>	<b>-0.00045</b>
%RSD	95.82145	0.23731	1292.81558	6602.64168	0.57820	11.79783	9889.35302	0.00551	7.08182

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00089	-0.00110	-0.00228	0.15504	0.94330	0.00431	2.07706	0.00233	-0.00198

#2	-0.00046	-0.00078	-0.00230	0.15504	0.93697	0.00429	2.06964	0.00241	-0.00191
Mean	-0.00067	-0.00094	-0.00229	0.15504	0.94013	0.00430	2.07335	0.00237	-0.00195
%RSD	44.44774	23.71335	0.34595	0.00000	0.47645	0.28492	0.25306	2.33131	2.46351

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	2.17960	-0.00199	0.03007	-0.00376	0.00078	0.84058	-0.00269	-0.00650	0.00209
#2	2.16232	-0.00119	0.03376	-0.00168	-0.00100	0.86099	0.00020	0.00394	0.00136
Mean	2.17096	-0.00159	0.03191	-0.00272	-0.00011	0.85078	-0.00125	-0.00128	0.00172
%RSD	0.56295	35.71359	8.17714	53.98065	1156.58347	1.69685	163.99736	577.17520	29.80292

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	7.85552	0.00271	0.04052	-0.00790	0.00508	0.00003	-0.02686	0.00058	0.00030
#2	7.82415	-0.00229	0.04046	-0.00438	0.00514	-0.00078	-0.01243	0.00121	0.00088
Mean	7.83983	0.00021	0.04049	-0.00614	0.00511	-0.00038	-0.01965	0.00090	0.00059
%RSD	0.28292	1707.93275	0.10080	40.57362	0.94836	152.83529	51.92137	50.11142	69.16384

	Zr ppm	Pb calc	Se calc
#1	-0.00065	-0.00073	-0.00077
#2	-0.00059	-0.00123	0.00222
Mean	-0.00062	-0.00098	0.00072
%RSD	6.76703	35.60306	291.82412

Method : Paragon File : 111010A  
SampleId1 : 1110039-3D SampleId2 :  
Analysis commenced : 10/10/2011 19:17:13  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:11  
[SAMPLE]  
Position : TUBE150

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00053	0.25095	0.00199	0.00089	0.01299	0.00024	-0.00077	10.22397	-0.00056
#2	0.00033	0.24412	0.00001	0.00103	0.01302	0.00019	0.00346	10.24826	-0.00008
Mean	0.00043	0.24753	0.00100	0.00096	0.01301	0.00021	0.00134	10.23611	-0.00032
%RSD	33.23658	1.94893	140.70164	10.19513	0.19065	16.81470	222.15706	0.16780	105.05821

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.00045	0.00018	-0.00144	0.14507	0.94126	0.00430	2.08654	0.00256	0.00046
#2	0.00063	0.00021	-0.00137	0.14569	0.93810	0.00431	2.08077	0.00264	-0.00096
Mean	0.00054	0.00019	-0.00141	0.14538	0.93968	0.00431	2.08366	0.00260	-0.00025
%RSD	23.77733	7.90252	3.91858	0.30329	0.23834	0.28473	0.19585	2.12148	401.00622

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	2.16123	-0.00003	0.03837	0.00440	-0.00496	0.86099	-0.00224	0.00428	-0.00155
#2	2.14243	0.00003	0.03929	0.00475	-0.00514	0.84641	0.00064	0.00317	-0.00380

<b>Mean</b>	<b>2.15183</b>	<b>0.00000</b>	<b>0.03883</b>	<b>0.00458</b>	<b>-0.00505</b>	<b>0.85370</b>	<b>-0.00080</b>	<b>0.00372</b>	<b>-0.00267</b>
<b>%RSD</b>	0.61798	3380.16768	1.68007	5.39028	2.61834	1.20790	255.09225	21.12931	59.57036
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	7.82502	0.00736	0.04052	-0.00981	0.00456	0.00359	-0.00666	0.00160	-0.00028
#2	7.80287	-0.00194	0.04047	-0.00205	0.00491	0.00259	0.00315	0.00178	0.00176
<b>Mean</b>	<b>7.81395</b>	<b>0.00271</b>	<b>0.04049</b>	<b>-0.00593</b>	<b>0.00474</b>	<b>0.00309</b>	<b>-0.00175</b>	<b>0.00169</b>	<b>0.00074</b>
<b>%RSD</b>	0.20041	242.52585	0.08399	92.46058	5.24267	22.78045	396.00154	7.39447	194.50909
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00015	-0.00184	0.00039						
#2	-0.00014	-0.00185	-0.00148						
<b>Mean</b>	<b>0.00000</b>	<b>-0.00184</b>	<b>-0.00054</b>						
<b>%RSD</b>	9614.72834	0.32585	243.91392						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:11

SampleId1 : CCV

SampleId2 :

[CV]

Analysis commenced : 10/10/2011 19:19:05

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD6

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.19319	51.91066	0.50512	0.98529	0.95800	0.47699	0.51500	50.62536	0.49438
#2	0.19390	52.21131	0.50303	0.98142	0.96372	0.47851	0.52136	50.79831	0.49538
<b>Mean</b>	<b>0.19355</b>	<b>52.06098</b>	<b>0.50407</b>	<b>0.98335</b>	<b>0.96086</b>	<b>0.47775</b>	<b>0.51818</b>	<b>50.71184</b>	<b>0.49488</b>
<b>%RSD</b>	0.25783	0.40836	0.29342	0.27857	0.42111	0.22441	0.86803	0.24115	0.14339
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.47914	0.95116	1.02098	19.87657	47.73848	0.48429	51.02019	0.94505	0.96616
#2	0.48060	0.95475	1.02678	19.96020	47.98942	0.48721	51.19982	0.94877	0.97374
<b>Mean</b>	<b>0.47987</b>	<b>0.95296</b>	<b>1.02388</b>	<b>19.91839</b>	<b>47.86395</b>	<b>0.48575</b>	<b>51.11000</b>	<b>0.94691</b>	<b>0.96995</b>
<b>%RSD</b>	0.21560	0.26622	0.40091	0.29690	0.37073	0.42489	0.24851	0.27777	0.55238
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	48.40527	0.97343	4.96542	0.97980	0.95821	5.14450	0.48159	1.01299	0.99416
#2	48.64385	0.97358	4.96494	0.98077	0.96354	5.17088	0.48195	1.00091	0.99447
<b>Mean</b>	<b>48.52456</b>	<b>0.97350</b>	<b>4.96518</b>	<b>0.98028</b>	<b>0.96088</b>	<b>5.15769</b>	<b>0.48177</b>	<b>1.00695</b>	<b>0.99431</b>
<b>%RSD</b>	0.34767	0.01083	0.00676	0.06946	0.39164	0.36167	0.05300	0.84858	0.02207
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.81757	1.04866	0.47740	0.33475	0.47655	0.52479	4.70410	0.47489	0.98839
#2	4.84292	1.05010	0.48001	0.34536	0.47856	0.52121	4.73413	0.47604	0.99571
<b>Mean</b>	<b>4.83025</b>	<b>1.04938</b>	<b>0.47870</b>	<b>0.34005</b>	<b>0.47756</b>	<b>0.52300</b>	<b>4.71911</b>	<b>0.47547</b>	<b>0.99205</b>

%RSD	0.37112	0.09650	0.38538	2.20651	0.29726	0.48453	0.44998	0.17088	0.52124
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.97916	0.96540	1.00043						
#2	0.98205	0.96927	0.99661						
<b>Mean</b>	<b>0.98061</b>	<b>0.96734</b>	<b>0.99852</b>						
%RSD	0.20773	0.28292	0.27030						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:11

SampleId1 : CCB

SampleId2 :

[CB]

Analysis commenced : 10/10/2011 19:21:02

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD2

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00099	0.07279	0.00341	-0.00270	-0.00006	0.00059	-0.00598	0.03318	-0.00017
#2	-0.00079	0.07150	-0.00151	-0.00187	-0.00016	0.00055	-0.00208	0.02642	-0.00028
<b>Mean</b>	<b>-0.00089</b>	<b>0.07214</b>	<b>0.00095</b>	<b>-0.00228</b>	<b>-0.00011</b>	<b>0.00057</b>	<b>-0.00403</b>	<b>0.02980</b>	<b>-0.00023</b>
%RSD	15.71773	1.26362	365.72054	25.61312	68.84610	5.93069	68.35067	16.04118	32.37036

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00107	-0.00016	-0.00255	0.01886	-0.09126	0.00384	0.01046	0.00030	0.00005
#2	-0.00041	-0.00046	-0.00229	0.01627	-0.09781	0.00380	0.00305	0.00022	0.00066
<b>Mean</b>	<b>-0.00074</b>	<b>-0.00031</b>	<b>-0.00242</b>	<b>0.01756</b>	<b>-0.09453</b>	<b>0.00382</b>	<b>0.00675</b>	<b>0.00026</b>	<b>0.00036</b>
%RSD	63.73432	67.64628	7.52347	10.44949	4.89869	0.74823	77.60849	21.22496	120.14319

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.03957	-0.00151	0.00170	-0.00376	0.00270	0.00684	-0.00202	-0.00501	0.00635
#2	-0.04374	-0.00047	0.00147	0.00108	-0.00041	-0.00773	0.00077	0.00518	-0.00106
<b>Mean</b>	<b>-0.04165</b>	<b>-0.00099</b>	<b>0.00158</b>	<b>-0.00134</b>	<b>0.00115</b>	<b>-0.00045</b>	<b>-0.00062</b>	<b>0.00008</b>	<b>0.00264</b>
%RSD	7.08244	73.96910	10.29139	256.09187	191.43513	2309.94086	317.57840	8542.71349	198.42989

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.01752	0.00129	-0.00258	-0.00343	-0.00164	0.00589	-0.01696	-0.00054	-0.00028
#2	-0.01816	-0.00050	-0.00266	-0.00020	-0.00150	0.00799	-0.01811	-0.00037	-0.00086
<b>Mean</b>	<b>-0.01784</b>	<b>0.00039</b>	<b>-0.00262</b>	<b>-0.00182</b>	<b>-0.00157</b>	<b>0.00694</b>	<b>-0.01753</b>	<b>-0.00045</b>	<b>-0.00057</b>
%RSD	2.53027	321.04737	2.07604	125.65999	6.16525	21.31091	4.64722	27.42330	72.32830

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00167	0.00055	0.00256
#2	0.00147	0.00009	0.00102
<b>Mean</b>	<b>0.00157</b>	<b>0.00032</b>	<b>0.00179</b>
%RSD	9.28293	101.51414	61.14160

ted: 10/11/2011 11:38:23 User: MIKE LUNDGREEN  
 Method : Paragon File : 111010A  
 SampleId1 : 1110039-3L 5X SampleId2 :  
 Analysis commenced : 10/10/2011 19:23:04  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:12  
 [SAMPLE]  
 Position : TUBE151

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00029	0.07979	-0.00434	-0.00146	0.00184	0.00029	-0.00776	2.00607	-0.00064
#2	-0.00083	0.08015	0.00076	-0.00311	0.00187	0.00026	-0.00533	2.00138	-0.00047
Mean	-0.00056	0.07997	-0.00179	-0.00228	0.00186	0.00028	-0.00655	2.00372	-0.00055
%RSD	67.62971	0.31776	201.53891	51.22626	1.33623	9.77124	26.28992	0.16567	21.94845
	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00095	-0.00078	-0.00280	0.02509	0.08763	0.00377	0.39428	-0.00001	-0.00212
#2	-0.00065	-0.00091	-0.00280	0.02364	0.07407	0.00372	0.37945	-0.00009	-0.00178
Mean	-0.00080	-0.00085	-0.00280	0.02436	0.08085	0.00374	0.38686	-0.00005	-0.00195
%RSD	26.82061	11.15891	0.04522	4.21863	11.85407	0.87293	2.71007	105.77408	12.31756
	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.34537	-0.00169	0.00354	-0.00114	-0.00072	0.14671	-0.00403	0.00742	-0.00382
#2	0.34484	-0.00137	0.00424	-0.00203	-0.00012	0.14380	-0.00202	-0.00805	-0.00034
Mean	0.34510	-0.00153	0.00389	-0.00159	-0.00042	0.14525	-0.00303	-0.00031	-0.00208
%RSD	0.10860	15.11549	12.57400	39.83694	101.18040	1.41868	46.87811	3508.26344	118.53980
	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.50294	0.00307	0.00550	0.00436	-0.00036	0.00626	-0.02042	-0.00026	-0.00028
#2	1.51068	-0.00157	0.00556	-0.00600	-0.00044	0.00007	-0.02273	-0.00086	-0.00173
Mean	1.50681	0.00075	0.00553	-0.00082	-0.00040	0.00316	-0.02158	-0.00056	-0.00100
%RSD	0.36300	438.23320	0.73723	893.11995	13.53825	138.38099	7.56084	76.02852	102.32286
	Zr	Pb	Se						
	ppm	calc	calc						
#1	0.00028	-0.00086	-0.00008						
#2	0.00064	-0.00076	-0.00290						
Mean	0.00046	-0.00081	-0.00149						
%RSD	55.37556	9.12556	133.94876						

Method : Paragon File : 111010A  
 SampleId1 : 1110039-3MS SampleId2 :  
 Analysis commenced : 10/10/2011 19:24:58  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:12  
 [SAMPLE]  
 Position : TUBE152

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00023	2.34695	1.98042	0.49208	1.88342	0.04828	-0.00006	49.73888	0.04945
#2	-0.00065	2.36324	1.99587	0.49105	1.89134	0.04833	0.00109	49.70596	0.04829
<b>Mean</b>	<b>-0.00021</b>	<b>2.35510</b>	<b>1.98815</b>	<b>0.49157</b>	<b>1.88738</b>	<b>0.04831</b>	<b>0.00051</b>	<b>49.72242</b>	<b>0.04887</b>
%RSD	297.53675	0.48889	0.54951	0.14899	0.29674	0.06581	157.06524	0.04682	1.67002
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.46599	0.18596	0.24693	1.10082	37.14846	0.45386	41.43303	0.46277	0.94200
#2	0.46575	0.18499	0.24847	1.10312	37.32548	0.45672	41.56468	0.46356	0.94234
<b>Mean</b>	<b>0.46587</b>	<b>0.18547</b>	<b>0.24770</b>	<b>1.10197</b>	<b>37.23697</b>	<b>0.45529</b>	<b>41.49885</b>	<b>0.46317</b>	<b>0.94217</b>
%RSD	0.03567	0.37061	0.43985	0.14785	0.33614	0.44530	0.22433	0.11995	0.02561
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	38.50355	0.47843	9.82630	0.47712	0.46594	0.86099	0.47528	2.02994	1.98209
#2	38.68180	0.47942	9.88506	0.48056	0.46665	0.88433	0.47374	2.05664	2.00929
<b>Mean</b>	<b>38.59267</b>	<b>0.47892</b>	<b>9.85568</b>	<b>0.47884</b>	<b>0.46629</b>	<b>0.87266</b>	<b>0.47451</b>	<b>2.04329</b>	<b>1.99569</b>
%RSD	0.32659	0.14508	0.42163	0.50798	0.10773	1.89069	0.23029	0.92387	0.96356
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	9.74335	0.51193	0.50832	-0.03073	0.46362	2.01641	-0.02231	0.46970	0.48961
#2	9.80276	0.51550	0.51011	-0.03019	0.46499	2.04277	-0.02289	0.47097	0.48319
<b>Mean</b>	<b>9.77306</b>	<b>0.51372</b>	<b>0.50922</b>	<b>-0.03046</b>	<b>0.46431</b>	<b>2.02959</b>	<b>-0.02260</b>	<b>0.47033</b>	<b>0.48640</b>
%RSD	0.42981	0.49257	0.24894	1.23931	0.20774	0.91828	1.81039	0.19166	0.93243
	Zr ppm	Pb calc	Se calc						
#1	0.00442	0.46966	1.99803						
#2	0.00342	0.47128	2.02505						
<b>Mean</b>	<b>0.00392</b>	<b>0.47047</b>	<b>2.01154</b>						
%RSD	18.00719	0.24338	0.95014						

Method : Paragon File : 111010A  
SampleId1 : 1110039-3MSD SampleId2 :  
Analysis commenced : 10/10/2011 19:26:52  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:12  
[SAMPLE]

Position : TUBE153

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00107	2.34080	1.95426	0.48414	1.87486	0.04738	-0.00364	48.72469	0.04710
#2	-0.00034	2.35069	1.94827	0.48442	1.88177	0.04727	-0.00234	48.56030	0.04829
<b>Mean</b>	<b>-0.00071</b>	<b>2.34574</b>	<b>1.95127</b>	<b>0.48428</b>	<b>1.87831</b>	<b>0.04732</b>	<b>-0.00299</b>	<b>48.64250</b>	<b>0.04770</b>
%RSD	72.74688	0.29793	0.21688	0.04033	0.26019	0.16519	30.75100	0.23898	1.76779
	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo

	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.45790	0.18167	0.24728	1.07663	37.17176	0.45385	40.94938	0.45507	0.92323
#2	0.45578	0.18175	0.24693	1.07883	37.35646	0.45652	41.01709	0.45413	0.92767
<b>Mean</b>	<b>0.45684</b>	<b>0.18171</b>	<b>0.24711</b>	<b>1.07773</b>	<b>37.26411</b>	<b>0.45518</b>	<b>40.98324</b>	<b>0.45460</b>	<b>0.92545</b>
%RSD	0.32808	0.02962	0.10000	0.14427	0.35049	0.41494	0.11681	0.14663	0.33892

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	38.28226	0.47224	9.76584	0.47032	0.45974	0.86391	0.46604	2.03415	1.95772
#2	38.54484	0.47304	9.78875	0.46955	0.45829	0.85516	0.46585	2.03439	1.97778
<b>Mean</b>	<b>38.41355</b>	<b>0.47264</b>	<b>9.77730</b>	<b>0.46994</b>	<b>0.45902</b>	<b>0.85953</b>	<b>0.46595</b>	<b>2.03427</b>	<b>1.96775</b>
%RSD	0.48337	0.12027	0.16570	0.11614	0.22404	0.71982	0.02819	0.00818	0.72069

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	9.62941	0.50119	0.50581	-0.03044	0.45722	1.99828	-0.03787	0.46335	0.47008
#2	9.65356	0.50585	0.50761	-0.03225	0.45791	2.00743	-0.02864	0.46197	0.46716
<b>Mean</b>	<b>9.64149</b>	<b>0.50352</b>	<b>0.50671</b>	<b>-0.03135</b>	<b>0.45756</b>	<b>2.00286</b>	<b>-0.03326</b>	<b>0.46266</b>	<b>0.46862</b>
%RSD	0.17713	0.65346	0.25151	4.07386	0.10739	0.32324	19.62634	0.21093	0.43986

	Zr ppm	Pb calc	Se calc
#1	0.00161	0.46327	1.98317
#2	0.00187	0.46204	1.99663
<b>Mean</b>	<b>0.00174</b>	<b>0.46265</b>	<b>1.98990</b>
%RSD	10.64502	0.18754	0.47814

Method : Paragon File : 111010A  
SampleId1 : 1110053-1 SampleId2 :  
Analysis commenced : 10/10/2011 19:28:47  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:12  
[SAMPLE]

Position : TUBE154

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00039	0.04401	-0.00264	0.24913	0.01467	0.00040	-0.00547	51.34480	-0.00044
#2	-0.00083	0.04085	-0.00226	0.25058	0.01471	0.00040	-0.00174	51.25923	-0.00048
<b>Mean</b>	<b>-0.00022</b>	<b>0.04243</b>	<b>-0.00245</b>	<b>0.24986</b>	<b>0.01469</b>	<b>0.00040</b>	<b>-0.00361</b>	<b>51.30202</b>	<b>-0.00046</b>
%RSD	387.41944	5.26241	10.90094	0.41001	0.16881	0.45746	73.08745	0.11793	5.66928

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00051	-0.00016	0.00395	0.06850	13.76357	0.01908	13.88720	0.00615	0.00534
#2	-0.00117	-0.00056	0.00361	0.06870	13.83896	0.01917	13.92080	0.00615	0.00446
<b>Mean</b>	<b>-0.00084</b>	<b>-0.00036</b>	<b>0.00378</b>	<b>0.06860</b>	<b>13.80126</b>	<b>0.01913</b>	<b>13.90400</b>	<b>0.00615</b>	<b>0.00490</b>
%RSD	56.13747	77.98756	6.27073	0.21411	0.38629	0.32043	0.17086	0.00000	12.71497

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
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#1	78.76440	0.00119	2.98836	0.00170	-0.00080	44.74965	-0.00497	-0.00020	-0.00222
#2	78.91468	0.00063	2.99282	-0.00017	-0.00033	44.81089	-0.00431	0.00484	0.00076
<b>Mean</b>	<b>78.83954</b>	<b>0.00091</b>	<b>2.99059</b>	<b>0.00077</b>	<b>-0.00056</b>	<b>44.78027</b>	<b>-0.00464</b>	<b>0.00232</b>	<b>-0.00073</b>
%RSD	0.13479	43.98900	0.10544	172.47836	58.40497	0.09670	10.11566	153.59408	289.71229

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.07987	0.00057	0.37297	-0.01361	-0.00159	0.00419	-0.01468	0.00021	0.02820
#2	4.09638	0.00272	0.37448	-0.00925	-0.00162	0.00637	-0.02334	-0.00014	0.02879
<b>Mean</b>	<b>4.08813</b>	<b>0.00164</b>	<b>0.37373</b>	<b>-0.01143</b>	<b>-0.00161</b>	<b>0.00528</b>	<b>-0.01901</b>	<b>0.00003</b>	<b>0.02850</b>
%RSD	0.28549	92.20397	0.28652	26.94307	1.50843	29.20628	32.19540	764.68096	1.44255

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00069	0.00003	-0.00154
#2	0.00025	-0.00028	0.00212
<b>Mean</b>	<b>0.00047</b>	<b>-0.00012</b>	<b>0.00029</b>
%RSD	66.79441	181.23132	902.33861

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:12

SampleId1 : 1110053-2

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 19:33:54

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE155

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00156	0.03966	-0.00434	0.25410	0.01113	0.00040	-0.00418	53.08556	-0.00103
#2	-0.00093	0.03790	-0.00359	0.25576	0.01130	0.00037	-0.00142	52.64677	-0.00073
<b>Mean</b>	<b>-0.00124</b>	<b>0.03878</b>	<b>-0.00397</b>	<b>0.25493</b>	<b>0.01122</b>	<b>0.00038</b>	<b>-0.00280</b>	<b>52.86616</b>	<b>-0.00088</b>
%RSD	35.56901	3.20726	13.48566	0.45927	1.10522	5.36848	69.80323	0.58689	24.43028

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00124	-0.00142	0.00380	0.08439	14.21701	0.01952	14.28997	0.00670	0.00358
#2	-0.00118	-0.00091	0.00439	0.08460	14.26723	0.01961	14.30532	0.00677	0.00412
<b>Mean</b>	<b>-0.00121</b>	<b>-0.00117</b>	<b>0.00409</b>	<b>0.08449</b>	<b>14.24212</b>	<b>0.01956</b>	<b>14.29765</b>	<b>0.00674</b>	<b>0.00385</b>
%RSD	3.59122	30.69552	10.18728	0.17386	0.24936	0.34458	0.07591	0.81910	9.95991

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	80.80170	-0.00053	3.09166	-0.00505	0.00360	46.05799	-0.00509	-0.00369	0.00164
#2	80.93211	0.00071	3.12008	-0.00561	-0.00001	46.29718	-0.00086	0.00181	-0.00076
<b>Mean</b>	<b>80.86690</b>	<b>0.00009</b>	<b>3.10587</b>	<b>-0.00533</b>	<b>0.00179</b>	<b>46.17758</b>	<b>-0.00297</b>	<b>-0.00094</b>	<b>0.00044</b>
%RSD	0.11403	976.32526	0.64700	7.45165	142.47210	0.36626	100.48371	412.63657	386.41160

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.19570	0.00200	0.38042	-0.00822	-0.00165	0.00591	-0.03662	-0.00123	0.02617

#2	4.20259	-0.00407	0.38164	-0.02023	-0.00188	-0.00118	-0.02450	-0.00053	0.02530
<b>Mean</b>	<b>4.19915</b>	<b>-0.00104</b>	<b>0.38103</b>	<b>-0.01423</b>	<b>-0.00176</b>	<b>0.00237</b>	<b>-0.03056</b>	<b>-0.00088</b>	<b>0.02573</b>
%RSD	0.11595	414.77984	0.22523	59.68699	9.26755	212.05123	28.03614	56.59851	2.39597

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	-0.00028	0.00072	-0.00014
#2	0.00069	-0.00188	0.00010
<b>Mean</b>	<b>0.00020</b>	<b>-0.00058</b>	<b>-0.00002</b>
%RSD	334.19477	317.13537	773.56322

Method : Paragon File : 111010A  
**SampleId1 : 1110088-21 2X** **SampleId2 :**  
**Analysis commenced : 10/10/2011 19:35:47**  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:12

[SAMPLE]

Position : TUBE156

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00015	0.02760	0.00331	0.08651	0.01572	0.00036	-0.00095	248.25808	-0.00081
#2	-0.00031	0.02674	-0.00056	0.08913	0.01579	0.00034	-0.00029	249.21362	-0.00001
<b>Mean</b>	<b>-0.00023</b>	<b>0.02717</b>	<b>0.00138</b>	<b>0.08782</b>	<b>0.01576</b>	<b>0.00035</b>	<b>-0.00062</b>	<b>248.73585</b>	<b>-0.00041</b>
%RSD	49.59032	2.22105	199.20121	2.10967	0.31471	4.08673	74.49564	0.27164	137.96339

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00099	-0.00059	-0.00152	-0.00979	15.47131	0.02626	32.81871	0.00178	0.38974
#2	-0.00044	-0.00060	-0.00153	-0.00969	15.50471	0.02630	32.91085	0.00178	0.38770
<b>Mean</b>	<b>-0.00071</b>	<b>-0.00060</b>	<b>-0.00153</b>	<b>-0.00974</b>	<b>15.48801</b>	<b>0.02628</b>	<b>32.86478</b>	<b>0.00178</b>	<b>0.38872</b>
%RSD	53.94695	0.91218	0.51894	0.75369	0.15248	0.08550	0.19824	0.00000	0.37104

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	46.16992	-0.00071	0.96799	-0.00302	0.00060	248.12551	0.00263	0.00877	0.00932
#2	46.28812	0.00033	0.99560	0.00341	-0.00139	248.63077	0.00306	0.00789	0.00765
<b>Mean</b>	<b>46.22902</b>	<b>-0.00019</b>	<b>0.98180</b>	<b>0.00020</b>	<b>-0.00039</b>	<b>248.37814</b>	<b>0.00285</b>	<b>0.00833</b>	<b>0.00848</b>
%RSD	0.18080	383.21737	1.98808	2300.13041	360.26556	0.14384	10.62733	7.51247	13.92980

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	8.97054	-0.00443	2.00952	-0.02725	-0.00272	-0.00085	-0.01867	-0.00037	0.00147
#2	8.99833	0.00165	2.01717	-0.02982	-0.00257	-0.00112	-0.00424	0.00055	0.00030
<b>Mean</b>	<b>8.98444</b>	<b>-0.00139</b>	<b>2.01335</b>	<b>-0.02854</b>	<b>-0.00265</b>	<b>-0.00099</b>	<b>-0.01146</b>	<b>0.00009</b>	<b>0.00088</b>
%RSD	0.21870	308.60331	0.26897	6.36992	3.89012	18.99920	89.04496	737.05381	92.89590

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00011	-0.00060	0.00914
#2	0.00069	0.00021	0.00773

Mean 0.00040 -0.00019 0.00843UNDGREEN  
 %RSD 102.38986 294.72302 11.81892

Method : Paragon File : 111010A  
 SampleId1 : 1110088-22 2X SampleId2 :  
 Analysis commenced : 10/10/2011 19:37:41  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:13  
 [SAMPLE]  
 Position : TUBE157

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00114	0.02240	0.00057	0.08602	0.01555	0.00033	-0.00452	245.77796	-0.00043
#2	0.00009	0.01863	0.00218	0.08547	0.01551	0.00027	-0.00013	247.21690	-0.00056
Mean	-0.00052	0.02051	0.00138	0.08575	0.01553	0.00030	-0.00233	246.49743	-0.00050
%RSD	166.10524	12.96848	82.59663	0.45485	0.15966	12.85644	133.21941	0.41278	18.72499

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00111	-0.00114	-0.00187	-0.01031	15.30366	0.02603	32.53898	0.00147	0.38723
#2	-0.00044	-0.00084	-0.00221	-0.00979	15.24662	0.02589	32.58923	0.00155	0.38505
Mean	-0.00078	-0.00099	-0.00204	-0.01005	15.27514	0.02596	32.56411	0.00151	0.38614
%RSD	60.76866	21.27036	11.84130	3.65168	0.26402	0.36984	0.10911	3.65784	0.39842

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	45.66303	-0.00030	0.98493	-0.00139	-0.00039	245.56187	0.00061	0.00519	0.00838
#2	45.53365	-0.00059	0.99258	-0.00021	-0.00152	245.96018	0.00193	0.01988	0.00852
Mean	45.59834	-0.00044	0.98875	-0.00080	-0.00096	245.76103	0.00127	0.01253	0.00845
%RSD	0.20062	47.27227	0.54746	104.91828	83.41982	0.11460	73.08390	82.83269	1.21732

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	8.89522	0.00165	1.99159	-0.03241	-0.00263	0.00279	-0.01059	0.00026	-0.00115
#2	8.90575	0.00236	1.99076	-0.02784	-0.00262	0.00488	-0.01117	-0.00009	-0.00086
Mean	8.90049	0.00200	1.99118	-0.03013	-0.00262	0.00384	-0.01088	0.00009	-0.00100
%RSD	0.08366	25.23209	0.02948	10.73060	0.23107	38.57847	3.75311	283.59153	20.46454

	Zr ppm	Pb calc	Se calc
#1	0.00050	-0.00072	0.00732
#2	0.00042	-0.00109	0.01230
Mean	0.00046	-0.00090	0.00981
%RSD	13.11466	28.19906	35.94654

Method : Paragon File : 111010A  
 SampleId1 : 1110088-23 2X SampleId2 :  
 Analysis commenced : 10/10/2011 19:39:34  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:13  
 [SAMPLE]  
 Position : TUBE158

Final concentrations38:23 User: MIKE LUNDGREEN

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00059	0.02162	0.00341	0.08809	0.01565	0.00034	0.00051	246.06554	-0.00043
#2	-0.00059	0.01478	0.00067	0.08602	0.01562	0.00030	0.00051	246.33219	-0.00024
Mean	-0.00059	0.01820	0.00204	0.08706	0.01564	0.00032	0.00051	246.19886	-0.00034
%RSD	0.66823	26.57473	95.14009	1.68003	0.15859	8.49152	0.49219	0.07659	39.98253
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00129	-0.00124	-0.00212	-0.00979	15.44673	0.02619	32.77432	0.00147	0.38852
#2	-0.00099	-0.00086	-0.00187	-0.00989	15.35791	0.02610	32.75506	0.00147	0.38845
Mean	-0.00114	-0.00105	-0.00199	-0.00984	15.40232	0.02614	32.76469	0.00147	0.38849
%RSD	18.77961	25.08336	8.85601	0.74574	0.40774	0.24221	0.04157	0.00000	0.01238
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	46.12885	-0.00018	0.72671	-0.00148	0.00050	247.34237	-0.00060	0.01247	0.00729
#2	45.82383	0.00021	0.71837	-0.00214	-0.00050	247.45213	0.00196	0.01393	0.00765
Mean	45.97634	0.00002	0.72254	-0.00181	0.00000	247.39725	0.00068	0.01320	0.00747
%RSD	0.46912	1696.51037	0.81598	25.71023	23495.85345	0.03137	265.80967	7.84567	3.43875
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	8.96077	0.00343	2.00741	-0.03042	-0.00289	0.00133	-0.02328	0.00026	-0.00260
#2	8.95282	0.00200	2.00567	-0.02594	-0.00264	-0.00049	-0.01405	0.00026	-0.00028
Mean	8.95679	0.00272	2.00654	-0.02818	-0.00277	0.00042	-0.01867	0.00026	-0.00144
%RSD	0.06273	37.19820	0.06139	11.23215	6.34847	305.96191	34.97047	0.00538	114.15822
	Zr ppm	Pb calc	Se calc						
#1	0.00015	-0.00016	0.00901						
#2	-0.00008	-0.00104	0.00974						
Mean	0.00004	-0.00060	0.00938						
%RSD	420.10956	103.99219	5.50471						

Method : Paragon File : 111010A  
SampleId1 : 1110088-24 2X SampleId2 :  
Analysis commenced : 10/10/2011 19:41:26  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:13  
[SAMPLE]  
Position : TUBE159

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00011	0.01958	0.00417	0.08988	0.01537	0.00030	0.00230	251.34684	-0.00044
#2	-0.00036	0.02583	0.00237	0.08892	0.01544	0.00031	-0.00013	252.69794	-0.00072
Mean	-0.00023	0.02270	0.00327	0.08940	0.01541	0.00030	0.00109	252.02239	-0.00058
%RSD	73.71840	19.46206	38.88221	0.76346	0.32187	3.81314	158.60595	0.37908	34.25408

ted: 10/11/2011 11:38:23 User: MIKE LUNDGREEN

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00081	-0.00082	-0.00145	-0.00834	16.85655	0.02634	33.69082	0.00061	0.39919
#2	-0.00056	-0.00044	-0.00153	-0.00803	16.89327	0.02641	33.86722	0.00045	0.40361
Mean	-0.00068	-0.00063	-0.00149	-0.00818	16.87491	0.02637	33.77902	0.00053	0.40140
%RSD	25.02200	42.64398	4.06276	2.69141	0.15391	0.17040	0.36925	20.70147	0.77860

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	46.90709	-0.00074	0.24772	-0.00034	-0.00067	254.15321	0.00227	0.00542	0.00787
#2	47.07976	-0.00036	0.25673	0.00181	-0.00010	255.08376	0.00052	0.01472	0.00867
Mean	46.99342	-0.00055	0.25222	0.00074	-0.00039	254.61849	0.00140	0.01007	0.00827
%RSD	0.25980	49.80116	2.52527	205.75707	103.96454	0.25843	88.41640	65.30977	6.83729

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	9.05304	-0.00086	2.06088	-0.03902	-0.00299	0.00298	-0.00540	0.00030	0.00844
#2	9.10066	0.00236	2.07061	-0.03641	-0.00281	0.00589	-0.00540	0.00030	0.00815
Mean	9.07685	0.00075	2.06575	-0.03771	-0.00290	0.00443	-0.00540	0.00030	0.00830
%RSD	0.37096	302.21024	0.33297	4.88172	4.17778	46.46637	0.00278	0.01422	2.47726

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00118	-0.00056	0.00705
#2	0.00087	0.00053	0.01068
Mean	0.00103	-0.00001	0.00887
%RSD	21.68428	6083.83774	28.95282

Method : Paragon File : 111010A  
SampleId1 : 1110088-25 2X SampleId2 :  
Analysis commenced : 10/10/2011 19:43:17  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:13

[SAMPLE]

Position : TUBE160

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00083	0.02522	0.00029	0.08692	0.01513	0.00034	-0.00696	248.09781	-0.00003
#2	-0.00036	0.02421	0.00048	0.08871	0.01523	0.00034	-0.00565	247.87933	-0.00029
Mean	-0.00059	0.02472	0.00038	0.08782	0.01518	0.00034	-0.00630	247.98857	-0.00016
%RSD	56.48227	2.88733	34.88696	1.44346	0.49006	0.64977	14.63238	0.06230	112.67483

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00147	-0.00164	-0.00220	-0.01010	16.57139	0.02612	33.39924	0.00061	0.39634
#2	-0.00087	-0.00041	-0.00222	-0.01021	16.49286	0.02607	33.38039	0.00053	0.39627
Mean	-0.00117	-0.00103	-0.00221	-0.01015	16.53213	0.02610	33.38981	0.00057	0.39631
%RSD	36.65088	84.71968	0.58863	0.72287	0.33588	0.13306	0.03992	9.64483	0.01213

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	46.49809	0.00012	0.25880	-0.00157	-0.00217	251.22591	0.00248	0.01078	0.00874
#2	46.31302	0.00012	0.26481	-0.00225	-0.00011	251.01312	0.00068	0.00968	0.00867
<b>Mean</b>	<b>46.40555</b>	<b>0.00012</b>	<b>0.26181</b>	<b>-0.00191</b>	<b>-0.00114</b>	<b>251.11952</b>	<b>0.00158</b>	<b>0.01023</b>	<b>0.00870</b>
%RSD	0.28200	0.00000	1.62197	25.18204	127.84812	0.05992	80.25682	7.61375	0.59348

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	8.95950	-0.00050	2.05166	-0.02735	-0.00273	0.00032	-0.02790	0.00023	0.00030
#2	8.95251	0.00022	2.04537	-0.02969	-0.00279	-0.00148	-0.00424	0.00037	0.00001
<b>Mean</b>	<b>8.95601</b>	<b>-0.00014</b>	<b>2.04851</b>	<b>-0.02852</b>	<b>-0.00276</b>	<b>-0.00058</b>	<b>-0.01607</b>	<b>0.00030</b>	<b>0.00016</b>
%RSD	0.05519	358.25135	0.21699	5.82016	1.53715	220.06670	104.09131	33.30179	129.80803

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00013	-0.00197	0.00942
#2	0.00048	-0.00082	0.00900
<b>Mean</b>	<b>0.00030</b>	<b>-0.00140</b>	<b>0.00921</b>
%RSD	81.10560	58.21846	3.19011

Method : Paragon File : 111010A  
SampleId1 : CCV SampleId2 :  
Analysis commenced : 10/10/2011 19:45:08  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:13  
[CV]

Position : STD6

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.19417	51.93505	0.50750	0.98612	0.95846	0.47748	0.52344	50.96319	0.49631
#2	0.19392	52.51043	0.50959	0.99020	0.96984	0.47779	0.52171	50.92155	0.49872
<b>Mean</b>	<b>0.19405</b>	<b>52.22274</b>	<b>0.50854</b>	<b>0.98816</b>	<b>0.96415</b>	<b>0.47764</b>	<b>0.52258</b>	<b>50.94237</b>	<b>0.49752</b>
%RSD	0.09262	0.77908	0.29085	0.29207	0.83418	0.04499	0.23449	0.05780	0.34330

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.48139	0.95406	1.02303	19.91396	47.77875	0.48446	50.98511	0.94490	0.96923
#2	0.48134	0.95387	1.03611	19.98148	48.32547	0.49042	51.23490	0.94806	0.97974
<b>Mean</b>	<b>0.48137</b>	<b>0.95397</b>	<b>1.02957</b>	<b>19.94772</b>	<b>48.05211</b>	<b>0.48744</b>	<b>51.11001</b>	<b>0.94648</b>	<b>0.97449</b>
%RSD	0.00753	0.01395	0.89811	0.23933	0.80453	0.86524	0.34558	0.23651	0.76281

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	48.15084	0.98116	4.98868	0.97926	0.95648	5.19433	0.48203	1.00541	0.99350
#2	48.63042	0.98306	4.98132	0.98307	0.95762	5.25882	0.48335	1.01505	0.98786
<b>Mean</b>	<b>48.39063</b>	<b>0.98211</b>	<b>4.98500</b>	<b>0.98116</b>	<b>0.95705</b>	<b>5.22658</b>	<b>0.48269</b>	<b>1.01023</b>	<b>0.99068</b>
%RSD	0.70079	0.13748	0.10439	0.27491	0.08469	0.87251	0.19273	0.67489	0.40288

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.79783	1.05369	0.47929	0.34764	0.47352	0.52599	4.70581	0.47578	0.99366
#2	4.83493	1.05871	0.48539	0.35027	0.47656	0.52687	4.75379	0.47856	0.98693
<b>Mean</b>	<b>4.81638</b>	<b>1.05620</b>	<b>0.48234</b>	<b>0.34896</b>	<b>0.47504</b>	<b>0.52643</b>	<b>4.72980</b>	<b>0.47717</b>	<b>0.99030</b>
%RSD	0.54468	0.33589	0.89490	0.53298	0.45335	0.11738	0.71730	0.41112	0.48039

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.97972	0.96406	0.99747
#2	0.98585	0.96610	0.99692
<b>Mean</b>	<b>0.98278</b>	<b>0.96508</b>	<b>0.99719</b>
%RSD	0.44126	0.14909	0.03929

Method : Paragon File : 111010A  
SampleId1 : CCB SampleId2 :  
**Analysis commenced : 10/10/2011 19:47:09**  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:14  
[CB]

Position : STD2

Final concentrations

	<b>Ag</b> ppm	<b>Al</b> ppm	<b>As</b> ppm	<b>B</b> ppm	<b>Ba</b> ppm	<b>Be</b> ppm	<b>Bi</b> ppm	<b>Ca</b> ppm	<b>Cd</b> ppm
#1	-0.00025	0.08115	0.00360	-0.00166	-0.00002	0.00067	-0.00387	0.05164	0.00018
#2	-0.00021	0.08090	0.00227	-0.00173	-0.00009	0.00063	-0.00192	0.03838	0.00006
<b>Mean</b>	<b>-0.00023</b>	<b>0.08102</b>	<b>0.00294</b>	<b>-0.00170</b>	<b>-0.00006</b>	<b>0.00065</b>	<b>-0.00289</b>	<b>0.04501</b>	<b>0.00012</b>
%RSD	13.40830	0.21869	31.87910	2.87108	89.43653	5.01578	47.65113	20.83250	75.25948

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	-0.00035	0.00038	-0.00186	0.01782	-0.07839	0.00387	0.00964	0.00030	0.00053
#2	-0.00047	-0.00014	-0.00204	0.01689	-0.07206	0.00386	0.00511	0.00022	-0.00083
<b>Mean</b>	<b>-0.00041</b>	<b>0.00012</b>	<b>-0.00195</b>	<b>0.01736</b>	<b>-0.07522</b>	<b>0.00386</b>	<b>0.00737</b>	<b>0.00026</b>	<b>-0.00015</b>
%RSD	21.12411	304.01670	6.35656	3.80682	5.94402	0.10577	43.45311	21.22496	641.95016

	<b>Na</b> ppm	<b>Ni</b> ppm	<b>P</b> ppm	<b>Pb I</b> ppm	<b>Pb II</b> ppm	<b>S</b> ppm	<b>Sb</b> ppm	<b>Se I</b> ppm	<b>Se II</b> ppm
#1	-0.03348	-0.00006	-0.00061	-0.00234	0.00030	0.01558	-0.00135	-0.00333	0.00061
#2	-0.03837	-0.00125	-0.00268	-0.00086	-0.00010	0.00392	-0.00124	-0.00187	-0.00288
<b>Mean</b>	<b>-0.03592</b>	<b>-0.00065</b>	<b>-0.00164</b>	<b>-0.00160</b>	<b>0.00010</b>	<b>0.00975</b>	<b>-0.00130</b>	<b>-0.00260</b>	<b>-0.00114</b>
%RSD	9.62890	128.80981	89.26696	65.12057	273.00184	84.50836	5.72696	39.72003	216.87225

	<b>Si</b> ppm	<b>Sn</b> ppm	<b>Sr</b> ppm	<b>Th</b> ppm	<b>Ti</b> ppm	<b>Tl</b> ppm	<b>U</b> ppm	<b>V</b> ppm	<b>Zn</b> ppm
#1	-0.01763	0.00129	-0.00242	0.00040	-0.00142	0.00544	-0.01638	-0.00015	0.00001
#2	-0.01775	-0.00193	-0.00257	-0.00382	-0.00142	0.00289	-0.01061	-0.00022	-0.00144
<b>Mean</b>	<b>-0.01769</b>	<b>-0.00032</b>	<b>-0.00249</b>	<b>-0.00171</b>	<b>-0.00142</b>	<b>0.00417</b>	<b>-0.01349</b>	<b>-0.00019</b>	<b>-0.00071</b>
%RSD	0.48490	707.77882	4.36012	174.86514	0.00000	43.20574	30.24167	26.46798	143.99794

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
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#1	0.00151	-0.00058	-0.00071	UNDGREEN
#2	0.00183	-0.00035	-0.00254	
Mean	0.00167	-0.00047	-0.00162	
%RSD	13.41291	34.64346	80.04610	

Method : Paragon File : 111010A  
SampleId1 : 1110088-26 2X SampleId2 :  
Analysis commenced : 10/10/2011 19:49:09  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:14  
[SAMPLE]

Position : TUBE161

# Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00108	0.03857	0.00265	0.08637	0.01685	0.00049	-0.00193	247.54514	-0.00055
#2	-0.00036	0.03727	0.00114	0.08851	0.01681	0.00045	-0.00321	247.61714	-0.00012
Mean	-0.00072	0.03792	0.00190	0.08744	0.01683	0.00047	-0.00257	247.58114	-0.00034
%RSD	70.35883	2.40885	56.41752	1.72851	0.14736	6.58518	35.43664	0.02056	88.92290

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00105	-0.00167	-0.00254	-0.00450	15.63855	0.02611	33.62672	0.00085	0.39960
#2	-0.00068	-0.00041	-0.00136	-0.00398	15.46853	0.02589	33.45663	0.00092	0.39539
Mean	-0.00086	-0.00104	-0.00195	-0.00424	15.55354	0.02600	33.54167	0.00088	0.39749
%RSD	29.73881	85.21299	42.57902	8.66209	0.77296	0.59721	0.35857	6.24023	0.74995

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	46.63956	-0.00006	0.10943	-0.00483	0.00069	250.93242	-0.00139	0.00170	0.00729
#2	46.23399	0.00161	0.11866	-0.00033	-0.00001	250.10367	0.00301	0.01663	0.00823
Mean	46.43677	0.00077	0.11405	-0.00258	0.00034	250.51805	0.00081	0.00917	0.00776
%RSD	0.61758	152.05520	5.72321	123.51596	144.27805	0.23392	383.50288	115.14976	8.60550

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	8.93061	0.00057	2.06423	-0.02611	-0.00271	0.00306	-0.02848	-0.00051	0.00030
#2	8.88503	0.00343	2.05014	-0.02189	-0.00272	-0.00421	-0.00021	0.00027	0.00118
Mean	8.90782	0.00200	2.05719	-0.02400	-0.00272	-0.00058	-0.01434	-0.00012	0.00074
%RSD	0.36185	100.92444	0.48418	12.42943	0.22306	890.73936	139.37797	447.67369	83.36136

	Zr ppm	Pb calc	Se calc
#1	0.00097	-0.00115	0.00543
#2	0.00122	-0.00011	0.01103
Mean	0.00110	-0.00063	0.00823
%RSD	16.10118	115.96860	48.13702

Method : Paragon File : 111010A  
SampleId1 : 1110088-27 5X SampleId2 :  
Analysis commenced : 10/10/2011 19:51:05

Printed : 10/11/2011 11:38:14  
[SAMPLE]



Dilution ratio : 1.00000 to 1.00000

Tray :

Position : TUBE162

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00108	0.03796	0.00313	0.01233	-0.00069	0.00038	-0.00322	1.26763	-0.00067
#2	0.00010	0.03821	-0.00321	0.01309	-0.00065	0.00034	-0.00128	1.24522	-0.00030
<b>Mean</b>	<b>-0.00049</b>	<b>0.03809</b>	<b>-0.00004</b>	<b>0.01271</b>	<b>-0.00067</b>	<b>0.00036</b>	<b>-0.00225</b>	<b>1.25643</b>	<b>-0.00049</b>
%RSD	171.71306	0.46241	10629.14525	4.21885	3.70575	7.64604	61.18274	1.26086	53.81007

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00077	-0.00005	-0.00314	-0.00886	84.94671	0.01306	0.61917	-0.00048	-0.00110
#2	-0.00083	0.00049	-0.00297	-0.00958	85.16756	0.01308	0.61422	-0.00048	-0.00022
<b>Mean</b>	<b>-0.00080</b>	<b>0.00022</b>	<b>-0.00306</b>	<b>-0.00922</b>	<b>85.05714</b>	<b>0.01307</b>	<b>0.61669</b>	<b>-0.00048</b>	<b>-0.00066</b>
%RSD	5.33928	173.77119	4.06274	5.57286	0.18360	0.09376	0.56676	0.00000	94.73729

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	11.16236	-0.00065	35.82762	-0.00064	0.00245	6.30014	-0.00347	0.00003	-0.00296
#2	11.20233	-0.00107	36.15371	-0.00107	-0.00065	6.30014	-0.00336	-0.00984	0.00205
<b>Mean</b>	<b>11.18235</b>	<b>-0.00086</b>	<b>35.99066</b>	<b>-0.00085</b>	<b>0.00090</b>	<b>6.30014</b>	<b>-0.00342</b>	<b>-0.00491</b>	<b>-0.00045</b>
%RSD	0.25278	34.18545	0.64066	35.26209	242.52303	0.00000	2.34112	142.20501	784.05532

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	2.90751	0.00164	0.00675	-0.00050	-0.00187	0.00105	-0.02271	0.00009	0.00001
#2	2.92603	0.00057	0.00647	-0.00119	-0.00195	-0.00159	-0.02848	0.00041	-0.00028
<b>Mean</b>	<b>2.91677</b>	<b>0.00111</b>	<b>0.00661</b>	<b>-0.00084</b>	<b>-0.00191</b>	<b>-0.00027</b>	<b>-0.02559</b>	<b>0.00025</b>	<b>-0.00013</b>
%RSD	0.44902	68.37010	2.98069	57.02902	2.85369	699.89365	15.94122	90.90923	155.31687

	Zr ppm	Pb calc	Se calc
#1	-0.00025	0.00142	-0.00196
#2	0.00022	-0.00079	-0.00191
<b>Mean</b>	<b>-0.00002</b>	<b>0.00032</b>	<b>-0.00194</b>
%RSD	1847.79212	490.80788	2.12468

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:14

SampleId1 : 1110088-28 5X

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 19:53:02

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : TUBE163

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00015	0.04913	-0.00312	0.01329	-0.00072	0.00041	-0.00533	1.15093	-0.00051
#2	0.00014	0.04167	-0.00330	0.01350	-0.00072	0.00035	0.00068	1.15015	-0.00027

<b>Mean</b>	-0.00001	0.04540	-0.00321	0.01340	-0.00072	0.00038	-0.00232	1.15054	-0.00039
<b>%RSD</b>	2962.83145	11.62614	4.16596	1.09140	0.00000	11.25514	182.77990	0.04802	44.18305
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00053	0.00143	-0.00247	0.00391	83.94857	0.01330	0.68960	-0.00040	-0.00069
#2	-0.00089	0.00064	-0.00178	0.00319	83.82187	0.01328	0.69455	-0.00040	-0.00042
<b>Mean</b>	-0.00071	0.00104	-0.00213	0.00355	83.88522	0.01329	0.69208	-0.00040	-0.00056
<b>%RSD</b>	36.24245	53.50141	22.69764	14.47970	0.10680	0.06149	0.50505	0.00000	34.48026
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	11.41612	-0.00098	36.69817	-0.00090	0.00202	6.37645	-0.00059	-0.00389	-0.00070
#2	11.38697	-0.00059	36.83601	-0.00031	-0.00229	6.44103	0.00020	-0.00153	-0.00070
<b>Mean</b>	11.40155	-0.00079	36.76709	-0.00060	-0.00013	6.40874	-0.00020	-0.00271	-0.00070
<b>%RSD</b>	0.18078	34.74306	0.26508	68.61326	2291.57136	0.71253	282.10993	61.45353	0.01828
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	2.90943	0.00236	0.00645	-0.00384	-0.00179	0.00125	-0.01175	-0.00047	-0.00057
#2	2.91104	0.00022	0.00640	0.00125	-0.00185	0.00052	-0.00944	0.00051	0.00001
<b>Mean</b>	2.91024	0.00129	0.00642	-0.00129	-0.00182	0.00088	-0.01060	0.00002	-0.00028
<b>%RSD</b>	0.03916	117.77636	0.63468	278.59350	2.66195	58.15361	15.40187	3489.03186	148.04378
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00042	0.00105	-0.00176						
#2	0.00024	-0.00163	-0.00098						
<b>Mean</b>	0.00033	-0.00029	-0.00137						
<b>%RSD</b>	39.70515	654.47012	40.41451						

Method : Paragon File : 111010A  
SampleId1 : 1109372-1 10X SampleId2 :  
Analysis commenced : 10/10/2011 19:55:02  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:14  
[SAMPLE]  
Position : TUBE164

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00103	0.04031	-0.00557	0.00392	0.00583	0.00041	-0.00452	27.03378	-0.00046
#2	0.00003	0.04520	-0.00189	0.00413	0.00590	0.00038	0.00035	27.04136	-0.00017
<b>Mean</b>	-0.00050	0.04275	-0.00373	0.00402	0.00587	0.00039	-0.00208	27.03757	-0.00031
<b>%RSD</b>	151.09984	8.09871	69.90961	3.63420	0.84475	5.19931	165.46818	0.01981	63.79741
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00131	-0.00099	-0.00331	0.09072	0.19042	0.00637	5.12624	0.00599	-0.00151
#2	0.00045	-0.00041	-0.00273	0.09166	0.19268	0.00637	5.13614	0.00607	-0.00184
<b>Mean</b>	-0.00043	-0.00070	-0.00302	0.09119	0.19155	0.00637	5.13119	0.00603	-0.00168

%RSD	290.95730	58.40665	13.54491	0.72494	0.83406	0.09622	0.13655	0.91443	14.31207
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	5.01323	-0.00148	0.00954	-0.00412	-0.00054	22.12629	-0.00380	-0.00021	-0.00163
#2	4.99732	-0.00125	-0.00545	0.00128	-0.00120	22.09342	0.00020	0.00182	-0.00505
<b>Mean</b>	<b>5.00527</b>	<b>-0.00137</b>	<b>0.00205</b>	<b>-0.00142</b>	<b>-0.00087</b>	<b>22.10985</b>	<b>-0.00180</b>	<b>0.00081</b>	<b>-0.00334</b>
%RSD	0.22482	12.30867	518.08169	268.31199	53.36213	0.10511	156.77033	178.87578	72.33698
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.77941	0.00057	0.27731	-0.00590	-0.00202	0.00100	-0.02855	0.00025	0.00205
#2	0.78698	-0.00050	0.27633	-0.00168	-0.00179	-0.00007	-0.00258	0.00081	0.00176
<b>Mean</b>	<b>0.78320</b>	<b>0.00004</b>	<b>0.27682</b>	<b>-0.00379</b>	<b>-0.00191</b>	<b>0.00046</b>	<b>-0.01556</b>	<b>0.00053</b>	<b>0.00190</b>
%RSD	0.68376	2071.41798	0.25226	78.69399	8.26253	164.04182	117.97267	75.20503	10.80428
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00078	-0.00174	-0.00116						
#2	0.00097	-0.00038	-0.00276						
<b>Mean</b>	<b>0.00087</b>	<b>-0.00106</b>	<b>-0.00196</b>						
%RSD	15.67735	90.98496	57.73949						

Method : Paragon File : 111010A  
SampleId1 : 1109372-1D 10X SampleId2 :  
Analysis commenced : 10/10/2011 19:56:57  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:15  
[SAMPLE]

Position : TUBE165

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00054	0.03883	-0.00321	0.00385	0.00492	0.00038	-0.00501	26.72167	-0.00037
#2	-0.00010	0.03902	-0.00208	0.00516	0.00513	0.00034	-0.00111	26.72113	-0.00067
<b>Mean</b>	<b>-0.00032</b>	<b>0.03893</b>	<b>-0.00264</b>	<b>0.00451</b>	<b>0.00503</b>	<b>0.00036</b>	<b>-0.00306</b>	<b>26.72140</b>	<b>-0.00052</b>
%RSD	95.82653	0.34823	30.36241	20.55199	2.95833	8.21739	90.09367	0.00143	40.79302
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00052	-0.00108	-0.00280	0.08854	0.19065	0.00634	5.05770	0.00592	-0.00130
#2	-0.00076	-0.00062	-0.00289	0.08699	0.18545	0.00633	5.06843	0.00584	-0.00103
<b>Mean</b>	<b>-0.00064</b>	<b>-0.00085</b>	<b>-0.00285</b>	<b>0.08776</b>	<b>0.18805</b>	<b>0.00634</b>	<b>5.06307</b>	<b>0.00588</b>	<b>-0.00117</b>
%RSD	26.74118	37.89963	2.25775	1.25539	1.95405	0.16118	0.14992	0.93870	16.44139
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.90469	-0.00101	0.00539	-0.00552	0.00062	21.81858	-0.00180	0.00114	-0.00192
#2	4.90596	-0.00113	0.00308	-0.00173	-0.00070	21.87235	-0.00235	0.00305	-0.00388
<b>Mean</b>	<b>4.90532</b>	<b>-0.00107</b>	<b>0.00424</b>	<b>-0.00363</b>	<b>-0.00004</b>	<b>21.84547</b>	<b>-0.00207</b>	<b>0.00209</b>	<b>-0.00290</b>
%RSD	0.01830	7.86587	38.49107	73.88167	2267.10156	0.17403	19.04021	64.56766	47.79368

ted: 10/11/2011 11:38:23 User: MIKE LUNDGREEN

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	0.76825	-0.00193	0.27195	-0.00541	-0.00190	0.00164	-0.02162	0.00011	0.00205
#2	0.77103	-0.00050	0.27272	-0.00344	-0.00187	-0.00145	-0.01469	0.00021	0.00263
Mean	0.76964	-0.00121	0.27234	-0.00443	-0.00188	0.00010	-0.01816	0.00016	0.00234
%RSD	0.25531	83.24504	0.20108	31.46198	0.96420	2243.12733	26.96927	46.69636	17.57951

	Zr ppm	Pb calc	Se calc
#1	0.00069	-0.00143	-0.00090
#2	0.00074	-0.00104	-0.00158
Mean	0.00071	-0.00124	-0.00124
%RSD	4.75085	22.14472	38.36035

Method : Paragon File : 111010A  
 SampleId1 : 1109372-1L 50X SampleId2 :  
 Analysis commenced : 10/10/2011 19:58:55  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:15  
 [SAMPLE]

Position : TUBE166

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00005	0.02972	-0.00406	-0.00194	0.00044	0.00027	0.00181	5.37168	-0.00072
#2	-0.00039	0.03253	-0.00321	-0.00221	0.00044	0.00024	-0.00160	5.39344	-0.00023
Mean	-0.00017	0.03113	-0.00364	-0.00208	0.00044	0.00025	0.00011	5.38256	-0.00048
%RSD	180.51762	6.37769	16.55254	9.38784	0.00000	6.72618	2293.40231	0.28582	72.75063

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00040	-0.00070	-0.00332	0.01585	-0.03796	0.00411	1.00393	0.00085	-0.00205
#2	-0.00107	-0.00083	-0.00271	0.01824	-0.03457	0.00412	1.00393	0.00085	-0.00225
Mean	-0.00074	-0.00077	-0.00302	0.01704	-0.03627	0.00412	1.00393	0.00085	-0.00215
%RSD	63.90416	12.25009	14.11129	9.90628	6.60543	0.14881	0.00000	0.00000	6.69118

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	0.86418	-0.00137	-0.00314	0.00021	0.00301	4.45010	-0.00125	0.00720	-0.00056
#2	0.86612	-0.00172	-0.00360	-0.00189	-0.00051	4.45303	-0.00258	-0.00547	-0.00303
Mean	0.86515	-0.00154	-0.00337	-0.00084	0.00125	4.45156	-0.00192	0.00087	-0.00179
%RSD	0.15851	16.33094	9.66702	177.38550	199.37247	0.04652	49.25466	1034.33489	97.50633

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	0.13779	-0.00121	0.05303	-0.00344	-0.00191	0.00471	-0.01926	-0.00061	0.00379
#2	0.14015	-0.00050	0.05320	-0.00203	-0.00191	0.00343	-0.02330	-0.00037	0.00321
Mean	0.13897	-0.00086	0.05312	-0.00273	-0.00191	0.00407	-0.02128	-0.00049	0.00350
%RSD	1.20190	58.98597	0.21777	36.49833	0.00000	22.16209	13.42509	35.78311	11.74148

	<b>Zr</b>	<b>Pb</b>	<b>SeUNDGREEN</b>
	ppm	calc	calc
#1	0.00048	0.00208	0.00203
#2	0.00050	-0.00097	-0.00384
<b>Mean</b>	<b>0.00049</b>	<b>0.00056</b>	<b>-0.00091</b>
<b>%RSD</b>	<b>2.01880</b>	<b>388.42176</b>	<b>457.70096</b>

Method : Paragon File : 111010A  
SampleId1 : 1109372-1A 10X SampleId2 :  
Analysis commenced : 10/10/2011 20:00:58  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:15

[SAMPLE]

Position : TUBE167

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00045	0.03448	-0.00151	0.00282	0.00590	0.00026	-0.00111	27.09330	-0.00055
#2	-0.00049	0.03063	-0.00056	0.00392	0.00587	0.00024	-0.00647	27.18123	-0.00054
<b>Mean</b>	<b>-0.00047</b>	<b>0.03255</b>	<b>-0.00104</b>	<b>0.00337</b>	<b>0.00589</b>	<b>0.00025</b>	<b>-0.00379</b>	<b>27.13727</b>	<b>-0.00055</b>
<b>%RSD</b>	<b>7.00422</b>	<b>8.37051</b>	<b>64.59757</b>	<b>23.15006</b>	<b>0.42112</b>	<b>3.82862</b>	<b>99.98714</b>	<b>0.22912</b>	<b>1.38009</b>

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00076	-0.00016	-0.00298	0.09114	0.18251	0.00639	5.18776	0.00599	-0.00137
#2	-0.00082	-0.00103	-0.00281	0.09239	0.17438	0.00639	5.22409	0.00615	-0.00205
<b>Mean</b>	<b>-0.00079</b>	<b>-0.00059</b>	<b>-0.00289</b>	<b>0.09176</b>	<b>0.17845</b>	<b>0.00639</b>	<b>5.20592</b>	<b>0.00607</b>	<b>-0.00171</b>
<b>%RSD</b>	<b>5.41793</b>	<b>102.48980</b>	<b>4.24732</b>	<b>0.96058</b>	<b>3.22304</b>	<b>0.00000</b>	<b>0.49353</b>	<b>1.81710</b>	<b>28.05627</b>

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	5.05972	-0.00202	-0.00314	-0.00121	0.00061	44.04261	-0.00158	0.00495	0.00048
#2	5.11213	-0.00134	0.00124	-0.00097	-0.00017	44.42820	-0.00380	0.00271	-0.00250
<b>Mean</b>	<b>5.08592</b>	<b>-0.00168</b>	<b>-0.00095</b>	<b>-0.00109</b>	<b>0.00022</b>	<b>44.23540</b>	<b>-0.00269</b>	<b>0.00383</b>	<b>-0.00101</b>
<b>%RSD</b>	<b>0.72872</b>	<b>28.80612</b>	<b>325.37726</b>	<b>15.07021</b>	<b>249.31382</b>	<b>0.61637</b>	<b>58.32101</b>	<b>41.41261</b>	<b>207.89313</b>

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.78743	-0.00300	0.27728	-0.00347	-0.00188	0.00138	-0.01297	0.00004	0.00118
#2	0.79826	-0.00443	0.28079	-0.00561	-0.00191	0.00065	-0.01643	0.00011	0.00088
<b>Mean</b>	<b>0.79285</b>	<b>-0.00372</b>	<b>0.27904</b>	<b>-0.00454</b>	<b>-0.00190</b>	<b>0.00101</b>	<b>-0.01470</b>	<b>0.00007</b>	<b>0.00103</b>
<b>%RSD</b>	<b>0.96624</b>	<b>27.20179</b>	<b>0.88821</b>	<b>33.28745</b>	<b>1.27690</b>	<b>51.01359</b>	<b>16.66000</b>	<b>69.16132</b>	<b>19.94817</b>

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00056	0.00000	0.00197
#2	0.00057	-0.00044	-0.00077
<b>Mean</b>	<b>0.00057</b>	<b>-0.00022</b>	<b>0.00060</b>
<b>%RSD</b>	<b>0.83007</b>	<b>143.17466</b>	<b>321.96544</b>

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:15

SampleId1 : 1109301-1 10X      SampleId2 :  
 Analysis commenced : 10/10/2011 20:03:04  
 Dilution ratio : 1.00000 to 1.00000      Tray :

[SAMPLE]  
 Position : TUBE168

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00215	1.86859	0.23103	0.00220	0.17311	0.00051	-0.00332	2.83595	-0.00043
#2	0.00273	1.85165	0.23454	0.00178	0.17283	0.00050	0.00026	2.84509	0.00006
Mean	0.00244	1.86012	0.23278	0.00199	0.17297	0.00051	-0.00153	2.84052	-0.00018
%RSD	16.88330	0.64382	1.06549	14.69497	0.11495	1.18783	164.98699	0.22752	188.45091
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.00884	0.16221	0.05116	30.64348	0.59342	0.00540	1.05213	6.84420	0.04000
#2	0.00968	0.16423	0.05047	30.76301	0.59929	0.00541	1.06161	6.87236	0.04054
Mean	0.00926	0.16322	0.05082	30.70324	0.59635	0.00540	1.05687	6.85828	0.04027
%RSD	6.46505	0.87570	0.96083	0.27528	0.69704	0.18901	0.63401	0.29034	0.95279
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	0.30592	0.00725	0.41548	0.00950	0.01099	0.07969	-0.00213	-0.00077	0.00151
#2	0.30264	0.00811	0.42218	0.01182	0.00925	0.08260	0.00007	-0.00828	-0.00058
Mean	0.30428	0.00768	0.41883	0.01066	0.01012	0.08114	-0.00103	-0.00453	0.00046
%RSD	0.76101	7.93156	1.13193	15.34695	12.16243	2.53938	151.69592	117.44252	317.26504
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	2.84341	-0.00458	0.06316	0.00929	0.12853	-0.00231	-0.01242	0.15267	0.02966
#2	2.84211	-0.00423	0.06306	0.00790	0.12928	-0.00262	-0.00442	0.15368	0.02966
Mean	2.84276	-0.00440	0.06311	0.00859	0.12890	-0.00247	-0.00842	0.15317	0.02966
%RSD	0.03238	5.72386	0.10784	11.49260	0.41369	8.75173	67.14573	0.46731	0.00000
	Zr ppm	Pb calc	Se calc						
#1	0.00164	0.01049	0.00075						
#2	0.00185	0.01010	-0.00314						
Mean	0.00174	0.01030	-0.00120						
%RSD	8.34660	2.68161	229.84815						

Method : Paragon      File : 111010A  
 SampleId1 : 1109301-1D 10X      SampleId2 :  
 Analysis commenced : 10/10/2011 20:05:02  
 Dilution ratio : 1.00000 to 1.00000      Tray :

Printed : 10/11/2011 11:38:15  
 [SAMPLE]  
 Position : TUBE169

Final concentrations

Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
-----------	-----------	-----------	----------	-----------	-----------	-----------	-----------	-----------

#1	0.00293	2.50878	0.31297	0.00123	0.22068	0.00063	-0.00126	3.60177	-0.00039
#2	0.00298	2.48705	0.30823	0.00178	0.21917	0.00061	-0.00240	3.56857	-0.00005
<b>Mean</b>	<b>0.00296</b>	<b>2.49792</b>	<b>0.31060</b>	<b>0.00151</b>	<b>0.21993</b>	<b>0.00062</b>	<b>-0.00183</b>	<b>3.58517</b>	<b>-0.00022</b>
%RSD	1.13445	0.61511	1.08001	25.86414	0.48625	1.50559	44.10507	0.65483	109.95165

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.01106	0.21872	0.06485	41.60049	0.83313	0.00602	1.40979	8.51378	0.05031
#2	0.01094	0.21661	0.06476	41.22752	0.82205	0.00600	1.38753	8.44370	0.04997
<b>Mean</b>	<b>0.01100</b>	<b>0.21767</b>	<b>0.06481</b>	<b>41.41400</b>	<b>0.82759</b>	<b>0.00601</b>	<b>1.39866</b>	<b>8.47874</b>	<b>0.05014</b>
%RSD	0.77225	0.68457	0.09355	0.63682	0.94699	0.17001	1.12498	0.58448	0.47831

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.34980	0.00910	0.53897	0.01010	0.01455	0.06220	-0.00118	0.00063	0.00511
#2	0.34667	0.00990	0.53273	0.01118	0.01191	0.07386	-0.00261	-0.00134	0.00038
<b>Mean</b>	<b>0.34823</b>	<b>0.00950</b>	<b>0.53585</b>	<b>0.01064</b>	<b>0.01323</b>	<b>0.06803</b>	<b>-0.00190</b>	<b>-0.00035</b>	<b>0.00274</b>
%RSD	0.63595	5.97488	0.82429	7.20684	14.12269	12.11525	53.15419	395.67733	121.82945

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.53319	0.00288	0.08236	0.01747	0.16920	-0.00357	-0.01238	0.20178	0.03692
#2	3.50012	-0.00105	0.08161	0.01217	0.16768	0.00173	-0.01213	0.20019	0.03547
<b>Mean</b>	<b>3.51666</b>	<b>0.00091</b>	<b>0.08199</b>	<b>0.01482</b>	<b>0.16844</b>	<b>-0.00092</b>	<b>-0.01225</b>	<b>0.20098</b>	<b>0.03620</b>
%RSD	0.66494	305.11849	0.63955	25.32478	0.64046	405.94521	1.46565	0.56001	2.83911

	Zr	Pb	Se
	ppm	calc	calc
#1	0.00139	0.01307	0.00362
#2	0.00176	0.01166	-0.00019
<b>Mean</b>	<b>0.00158</b>	<b>0.01237</b>	<b>0.00171</b>
%RSD	16.50545	8.01167	157.33100

Method : Paragon File : 111010A  
SampleId1 : 1109301-1L 50X SampleId2 :  
Analysis commenced : 10/10/2011 20:06:57  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:16  
[SAMPLE]

Position : TUBE170

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00035	0.40482	0.05203	-0.00249	0.03414	0.00026	-0.00249	0.55473	-0.00034
#2	0.00024	0.39329	0.04995	-0.00256	0.03410	0.00026	-0.00168	0.55577	-0.00029
<b>Mean</b>	<b>-0.00006</b>	<b>0.39905</b>	<b>0.05099</b>	<b>-0.00252</b>	<b>0.03412</b>	<b>0.00026</b>	<b>-0.00209</b>	<b>0.55525</b>	<b>-0.00031</b>
%RSD	738.13502	2.04325	2.88665	1.93047	0.07270	0.33872	27.56092	0.13256	11.02157

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00140	0.03309	0.00797	5.97919	0.04155	0.00398	0.17971	1.38733	0.00636

#2	0.00141	0.03295	0.00814	5.96973	0.04968	0.00398	0.18094	1.38701	0.00643
<b>Mean</b>	<b>0.00140</b>	<b>0.03302</b>	<b>0.00805</b>	<b>5.97446</b>	<b>0.04561</b>	<b>0.00398</b>	<b>0.18033</b>	<b>1.38717</b>	<b>0.00639</b>
%RSD	0.03475	0.29560	1.46240	0.11197	12.60670	0.00000	0.48445	0.01624	0.74989

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	0.00015	0.00074	0.08151	0.00095	0.00334	-0.00773	-0.00397	-0.00269	0.00036
#2	-0.00038	0.00128	0.08128	0.00152	0.00164	-0.00773	0.00025	-0.00459	-0.00102
<b>Mean</b>	<b>-0.00011</b>	<b>0.00101</b>	<b>0.08140</b>	<b>0.00124</b>	<b>0.00249</b>	<b>-0.00773</b>	<b>-0.00186</b>	<b>-0.00364</b>	<b>-0.00033</b>
%RSD	326.55550	37.38913	0.20044	32.36120	48.26353	0.00000	160.74236	36.90906	295.98550

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	0.56806	-0.00232	0.01015	-0.00188	0.02498	-0.00195	-0.01640	0.03114	0.00612
#2	0.56688	-0.00089	0.01014	-0.00084	0.02463	0.00087	-0.01062	0.03093	0.00553
<b>Mean</b>	<b>0.56747</b>	<b>-0.00160</b>	<b>0.01015</b>	<b>-0.00136</b>	<b>0.02481</b>	<b>-0.00054</b>	<b>-0.01351</b>	<b>0.03104</b>	<b>0.00583</b>
%RSD	0.14795	63.08895	0.06697	54.29780	1.00113	371.13538	30.23381	0.48670	7.05542

	Zr ppm	Pb calc	Se calc
#1	0.00080	0.00255	-0.00065
#2	0.00086	0.00160	-0.00221
<b>Mean</b>	<b>0.00083</b>	<b>0.00207</b>	<b>-0.00143</b>
%RSD	5.20759	32.23666	76.76119

Method : Paragon File : 111010A  
SampleId1 : CCV SampleId2 :  
Analysis commenced : 10/10/2011 20:08:48  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:16  
[CV]

Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19318	52.12235	0.50160	0.98487	0.96159	0.47419	0.51924	50.52926	0.49604
#2	0.19447	51.86070	0.50265	0.98612	0.95704	0.47425	0.51760	50.58988	0.49577
<b>Mean</b>	<b>0.19383</b>	<b>51.99152</b>	<b>0.50212</b>	<b>0.98550</b>	<b>0.95932</b>	<b>0.47422</b>	<b>0.51842</b>	<b>50.55957</b>	<b>0.49590</b>
%RSD	0.47130	0.35585	0.14728	0.08935	0.33533	0.00852	0.22381	0.08478	0.03814

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.47897	0.94745	1.03006	19.83656	48.05608	0.48750	50.93651	0.93991	0.96527
#2	0.47903	0.94718	1.02552	19.81292	47.71163	0.48373	50.85030	0.93959	0.96555
<b>Mean</b>	<b>0.47900</b>	<b>0.94731</b>	<b>1.02779</b>	<b>19.82474</b>	<b>47.88385</b>	<b>0.48562</b>	<b>50.89341</b>	<b>0.93975</b>	<b>0.96541</b>
%RSD	0.00862	0.02006	0.31232	0.08433	0.50866	0.54974	0.11978	0.02382	0.02000

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	48.80776	0.97402	4.95877	0.97257	0.95666	5.16209	0.47739	1.00972	0.98482
#2	48.48237	0.98130	4.93575	0.97830	0.94384	5.10346	0.48252	1.00746	0.97644



<b>Mean</b>	<b>48.64507</b>	<b>0.97766</b>	<b>4.94726</b>	<b>0.97543</b>	<b>0.95025</b>	<b>5.13278</b>	<b>0.47996</b>	<b>1.00859</b>	<b>0.98063</b>
%RSD	0.47299	0.52650	0.32906	0.41484	0.95397	0.80760	0.75513	0.15858	0.60424
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.79392	1.04867	0.48240	0.34192	0.47277	0.52169	4.71049	0.47450	0.97874
#2	4.78087	1.06015	0.48085	0.34118	0.47088	0.52768	4.70645	0.47361	0.97874
<b>Mean</b>	<b>4.78740</b>	<b>1.05441</b>	<b>0.48163</b>	<b>0.34155</b>	<b>0.47183</b>	<b>0.52468</b>	<b>4.70847</b>	<b>0.47405</b>	<b>0.97874</b>
%RSD	0.19278	0.76975	0.22870	0.15199	0.28286	0.80701	0.06058	0.13269	0.00000
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.98059	0.96196	0.99311						
#2	0.97802	0.95532	0.98677						
<b>Mean</b>	<b>0.97931</b>	<b>0.95864</b>	<b>0.98994</b>						
%RSD	0.18546	0.49017	0.45304						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:16

SampleId1 : CCB

SampleId2 :

[CB]

Analysis commenced : 10/10/2011 20:10:46

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD2

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00088	0.06306	0.00417	-0.00194	-0.00041	0.00058	-0.00484	0.00146	-0.00027
#2	-0.00147	0.05825	-0.00198	-0.00263	-0.00048	0.00054	-0.00306	-0.00114	-0.00012
<b>Mean</b>	<b>-0.00118</b>	<b>0.06065</b>	<b>0.00109</b>	<b>-0.00228</b>	<b>-0.00044</b>	<b>0.00056</b>	<b>-0.00395</b>	<b>0.00016</b>	<b>-0.00019</b>
%RSD	34.99879	5.60847	397.79494	21.34426	11.24061	4.05865	31.89964	1154.51088	53.16353
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00083	-0.00078	-0.00246	0.00588	-0.07455	0.00383	-0.01548	-0.00009	-0.00001
#2	-0.00119	-0.00107	-0.00262	0.00526	-0.07319	0.00381	-0.01754	-0.00009	-0.00056
<b>Mean</b>	<b>-0.00101</b>	<b>-0.00093</b>	<b>-0.00254</b>	<b>0.00557</b>	<b>-0.07387</b>	<b>0.00382</b>	<b>-0.01651</b>	<b>-0.00009</b>	<b>-0.00029</b>
%RSD	25.40029	22.33802	4.58376	7.90309	1.29709	0.32115	8.81680	0.00000	134.59028
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.05309	-0.00113	-0.00337	-0.00360	0.00171	-0.02813	-0.00257	-0.00603	0.00140
#2	-0.05534	-0.00134	-0.00061	-0.00358	0.00197	-0.01064	-0.00212	-0.00379	0.00184
<b>Mean</b>	<b>-0.05422</b>	<b>-0.00123</b>	<b>-0.00199</b>	<b>-0.00359</b>	<b>0.00184</b>	<b>-0.01938</b>	<b>-0.00234</b>	<b>-0.00491</b>	<b>0.00162</b>
%RSD	2.93909	11.93911	98.33288	0.37583	9.73997	63.76911	13.37336	32.19919	19.00993
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.02212	0.00164	-0.00287	0.00026	-0.00152	0.00443	-0.02156	-0.00065	-0.00057
#2	-0.02351	0.00164	-0.00292	0.00207	-0.00155	-0.00422	-0.02964	-0.00121	-0.00028
<b>Mean</b>	<b>-0.02281</b>	<b>0.00164</b>	<b>-0.00289</b>	<b>0.00116</b>	<b>-0.00153</b>	<b>0.00010</b>	<b>-0.02560</b>	<b>-0.00093</b>	<b>-0.00042</b>

%RSD	4.28425	0.00129	1.17466	110.37787	1.18504	5878.58067	22.30967	42.82908	48.58942
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00102	-0.00005	-0.00107						
#2	0.00079	0.00012	-0.00004						
<b>Mean</b>	<b>0.00090</b>	<b>0.00003</b>	<b>-0.00055</b>						
%RSD	18.11854	375.45586	132.39073						

Method : Paragon File : 111010A  
SampleId1 : 1109301-1MS 10X SampleId2 :  
Analysis commenced : 10/10/2011 20:12:34  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:16  
[SAMPLE]  
Position : TUBE171

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.01288	4.21067	0.46767	0.05100	0.39295	0.00609	-0.00628	7.19388	0.00463
#2	0.01229	4.16291	0.46605	0.04969	0.38787	0.00600	0.00215	7.10031	0.00495
<b>Mean</b>	<b>0.01259</b>	<b>4.18679</b>	<b>0.46686</b>	<b>0.05035</b>	<b>0.39041</b>	<b>0.00604</b>	<b>-0.00207</b>	<b>7.14709</b>	<b>0.00479</b>
%RSD	3.29894	0.80662	0.24471	1.83965	0.91953	1.01013	288.31610	0.92572	4.72847

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.06009	0.20257	0.08393	35.25559	3.92109	0.04491	5.48382	7.26318	0.14450
#2	0.05972	0.19976	0.08256	34.79746	3.86765	0.04436	5.43179	7.17727	0.14266
<b>Mean</b>	<b>0.05991</b>	<b>0.20116</b>	<b>0.08324</b>	<b>35.02652</b>	<b>3.89437</b>	<b>0.04463</b>	<b>5.45781</b>	<b>7.22022</b>	<b>0.14358</b>
%RSD	0.43083	0.98714	1.16134	0.92486	0.97032	0.87411	0.67412	0.84129	0.90258

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.71646	0.06200	0.44900	0.05753	0.06279	0.04763	0.03971	0.20072	0.20624
#2	3.67527	0.05951	0.45964	0.05899	0.06322	0.06512	0.03650	0.20144	0.20615
<b>Mean</b>	<b>3.69586</b>	<b>0.06076</b>	<b>0.45432</b>	<b>0.05826</b>	<b>0.06301</b>	<b>0.05637</b>	<b>0.03811</b>	<b>0.20108</b>	<b>0.20620</b>
%RSD	0.78805	2.90621	1.65556	1.77082	0.48241	21.92997	5.96056	0.25527	0.03181

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.11160	0.05285	0.12089	0.01185	0.23160	0.20853	-0.01325	0.22168	0.08315
#2	4.07569	0.05428	0.11910	0.00786	0.22880	0.20059	-0.01525	0.21728	0.08141
<b>Mean</b>	<b>4.09365</b>	<b>0.05356</b>	<b>0.12000</b>	<b>0.00986</b>	<b>0.23020</b>	<b>0.20456</b>	<b>-0.01425</b>	<b>0.21948</b>	<b>0.08228</b>
%RSD	0.62020	1.89199	1.05094	28.60728	0.85845	2.74429	9.90492	1.41767	1.49934

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00425	0.06104	0.20440
#2	0.00423	0.06181	0.20458
<b>Mean</b>	<b>0.00424</b>	<b>0.06143</b>	<b>0.20449</b>
%RSD	0.28842	0.88935	0.06219

ted: 10/11/2011 11:38:23 User: MIKE LUNDGREEN  
 Method : Paragon File : 111010A  
 SampleId1 : 1109301-1MSD 10X SampleId2 :  
 Analysis commenced : 10/10/2011 20:14:29  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:16  
 [SAMPLE]  
 Position : TUBE172

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.01185	3.33590	0.38378	0.04617	0.32501	0.00529	0.00009	5.99269	0.00463
#2	0.01117	3.25522	0.37923	0.04459	0.31909	0.00517	-0.00123	5.86782	0.00439
Mean	0.01151	3.29556	0.38150	0.04538	0.32205	0.00523	-0.00057	5.93025	0.00451
%RSD	4.16306	1.73109	0.84476	2.47047	1.29925	1.59500	163.06011	1.48902	3.81429
	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.05299	0.15370	0.06664	26.27516	3.30671	0.03909	4.66964	5.73189	0.12407
#2	0.05123	0.15057	0.06434	25.77404	3.23765	0.03832	4.57801	5.62881	0.12325
Mean	0.05211	0.15213	0.06549	26.02460	3.27218	0.03870	4.62383	5.68035	0.12366
%RSD	2.38767	1.45307	2.48353	1.36157	1.49229	1.39332	1.40135	1.28315	0.46571
	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.16007	0.05291	0.35353	0.05211	0.05438	0.03306	0.03693	0.18618	0.18062
#2	3.08992	0.05160	0.33527	0.05336	0.05485	0.03598	0.03562	0.17545	0.18270
Mean	3.12499	0.05225	0.34440	0.05274	0.05461	0.03452	0.03628	0.18082	0.18166
%RSD	1.58728	1.76992	3.74824	1.68252	0.61306	5.96881	2.55220	4.19517	0.81071
	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	3.31170	0.04503	0.09705	0.00834	0.18918	0.19253	0.00036	0.17362	0.07094
#2	3.24076	0.04718	0.09497	0.00367	0.18592	0.18630	-0.01199	0.16949	0.07007
Mean	3.27623	0.04611	0.09601	0.00600	0.18755	0.18942	-0.00581	0.17155	0.07050
%RSD	1.53109	3.29530	1.52550	54.94115	1.23127	2.32862	150.27305	1.70013	0.87481
	Zr	Pb	Se						
	ppm	calc	calc						
#1	0.00273	0.05362	0.18247						
#2	0.00256	0.05435	0.18029						
Mean	0.00265	0.05399	0.18138						
%RSD	4.41438	0.96093	0.85109						

Method : Paragon File : 111010A  
 SampleId1 : 1109301-1A SampleId2 :  
 Analysis commenced : 10/10/2011 20:16:23  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:17  
 [SAMPLE]  
 Position : TUBE173

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.02769	20.17192	4.10102	0.49747	3.54008	0.04884	0.01159	64.67548	0.04654
#2	0.02774	20.26004	4.08564	0.49747	3.54214	0.04875	0.00461	64.71929	0.04695
Mean	0.02772	20.21598	4.09333	0.49747	3.54111	0.04880	0.00810	64.69739	0.04675
%RSD	0.11625	0.30825	0.26582	0.00000	0.04116	0.12714	60.87430	0.04789	0.62753

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.54932	1.66639	0.78806	315.48858	47.19516	0.50037	47.78041	59.79131	1.33858
#2	0.54787	1.66747	0.78891	315.60617	47.27954	0.50144	47.84244	59.84799	1.33550
Mean	0.54859	1.66693	0.78849	315.54738	47.23735	0.50091	47.81143	59.81965	1.33704
%RSD	0.18798	0.04590	0.07619	0.02635	0.12632	0.15064	0.09173	0.06699	0.16286

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	41.33289	0.54901	3.88372	0.55683	0.53595	0.83474	0.45565	1.77047	1.77619
#2	41.48525	0.54696	3.87287	0.55038	0.54051	0.84058	0.45194	1.77695	1.77977
Mean	41.40907	0.54798	3.87829	0.55360	0.53823	0.83766	0.45379	1.77371	1.77798
%RSD	0.26017	0.26518	0.19786	0.82355	0.59903	0.49240	0.57819	0.25848	0.14234

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	28.40845	0.50590	1.10424	0.04174	1.64520	1.94649	0.07928	1.89215	0.72449
#2	28.51669	0.50339	1.10362	0.04286	1.64578	1.94311	0.08843	1.89321	0.71631
Mean	28.46257	0.50464	1.10393	0.04230	1.64549	1.94480	0.08385	1.89268	0.72040
%RSD	0.26892	0.35124	0.03994	1.86896	0.02516	0.12289	7.71907	0.03954	0.80250

	Zr ppm	Pb calc	Se calc
#1	0.01319	0.54290	1.77429
#2	0.01245	0.54380	1.77883
Mean	0.01282	0.54335	1.77656
%RSD	4.09457	0.11637	0.18095

Method : Paragon File : 111010A  
SampleId1 : 1109363-1A SampleId2 :  
Analysis commenced : 10/10/2011 20:18:17  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:17

[SAMPLE]

Position : TUBE174

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00168	89.36777	2.01876	0.49471	3.00963	0.05325	0.00462	357.91414	0.04759
#2	-0.00207	89.88379	2.01760	0.49768	3.02224	0.05336	0.00382	357.85171	0.04856
Mean	-0.00188	89.62578	2.01818	0.49619	3.01594	0.05330	0.00422	357.88293	0.04807
%RSD	14.87514	0.40712	0.04061	0.42314	0.29567	0.14364	13.37957	0.01233	1.42733

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.50107	0.24735	0.45972	174.37663	29.43272	0.13000	42.55216	3.37236	1.03997
#2	0.50157	0.24727	0.46383	174.47778	29.60048	0.13086	42.73692	3.37809	1.03887
<b>Mean</b>	<b>0.50132</b>	<b>0.24731</b>	<b>0.46178</b>	<b>174.42720</b>	<b>29.51660</b>	<b>0.13043</b>	<b>42.64454</b>	<b>3.37523</b>	<b>1.03942</b>
%RSD	0.07072	0.02308	0.62934	0.04101	0.40189	0.46341	0.30636	0.12020	0.07434

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	1.60354	0.57072	4.76353	0.65994	0.63683	6.44397	0.44843	1.86249	1.83349
#2	1.61563	0.56828	4.74551	0.65903	0.63708	6.43516	0.44853	1.87205	1.84359
<b>Mean</b>	<b>1.60958</b>	<b>0.56950</b>	<b>4.75452</b>	<b>0.65948</b>	<b>0.63695</b>	<b>6.43956</b>	<b>0.44848</b>	<b>1.86727</b>	<b>1.83854</b>
%RSD	0.53081	0.30326	0.26798	0.09754	0.02803	0.09670	0.01622	0.36196	0.38861

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	7.54913	0.49877	2.97868	0.10988	0.69651	1.89568	0.95580	1.31345	0.90447
#2	7.58512	0.50020	2.98589	0.10381	0.69785	1.90750	0.95515	1.31560	0.90388
<b>Mean</b>	<b>7.56712</b>	<b>0.49948</b>	<b>2.98229</b>	<b>0.10684</b>	<b>0.69718</b>	<b>1.90159</b>	<b>0.95547</b>	<b>1.31452</b>	<b>0.90418</b>
%RSD	0.33631	0.20250	0.17091	4.01349	0.13584	0.43961	0.04783	0.11591	0.04573

	Zr ppm	Pb calc	Se calc
#1	0.05504	0.64452	1.84314
#2	0.05580	0.64439	1.85307
<b>Mean</b>	<b>0.05542</b>	<b>0.64446</b>	<b>1.84811</b>
%RSD	0.97485	0.01476	0.37964

Method : Paragon File : 111010A  
SampleId1 : 1109363-12 5X SampleId2 :  
Analysis commenced : 10/10/2011 20:20:11  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:17  
[SAMPLE]  
Position : TUBE175

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00143	17.70885	0.03434	0.00599	0.23454	0.00276	0.00003	36.43603	0.00003
#2	-0.00089	17.59433	0.03065	0.00399	0.23159	0.00273	-0.00144	36.02009	0.00000
<b>Mean</b>	<b>-0.00116</b>	<b>17.65159</b>	<b>0.03249</b>	<b>0.00499</b>	<b>0.23306</b>	<b>0.00275</b>	<b>-0.00071</b>	<b>36.22806</b>	<b>0.00001</b>
%RSD	33.14726	0.45877	8.02843	28.33475	0.89652	0.76036	146.57669	0.81183	149.78858

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.01528	0.01629	0.07669	44.40724	4.38179	0.02477	9.28140	0.47165	0.03681
#2	0.01564	0.01629	0.07549	43.83868	4.34514	0.02452	9.20444	0.46741	0.03647
<b>Mean</b>	<b>0.01546</b>	<b>0.01629</b>	<b>0.07609</b>	<b>44.12296</b>	<b>4.36347</b>	<b>0.02465</b>	<b>9.24292</b>	<b>0.46953</b>	<b>0.03664</b>
%RSD	1.65161	0.01513	1.10825	0.91116	0.59379	0.71279	0.58876	0.63902	0.65445

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
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#1	0.19705	0.02399	1.01091	0.05282	0.05890	1.51749	-0.00221	0.01986	0.02471
#2	0.19676	0.02419	1.01323	0.05282	0.05919	1.48246	0.00113	0.01264	0.02292
<b>Mean</b>	<b>0.19691</b>	<b>0.02409</b>	<b>1.01207</b>	<b>0.05282</b>	<b>0.05905</b>	<b>1.49998</b>	<b>-0.00054</b>	<b>0.01625</b>	<b>0.02382</b>
%RSD	0.10363	0.61070	0.16210	0.00169	0.35000	1.65116	436.23246	31.43191	5.30385

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	1.55652	-0.00234	0.24318	0.03839	0.04668	0.00476	0.05899	0.20130	0.13230
#2	1.54665	-0.00091	0.23964	0.03561	0.04597	0.00079	0.05246	0.19818	0.13201
<b>Mean</b>	<b>1.55158</b>	<b>-0.00163</b>	<b>0.24141</b>	<b>0.03700</b>	<b>0.04632</b>	<b>0.00277</b>	<b>0.05572</b>	<b>0.19974</b>	<b>0.13215</b>
%RSD	0.44978	62.13735	1.03692	5.30441	1.08552	101.34817	8.29559	1.10230	0.15563

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.01295	0.05688	0.02310
#2	0.01331	0.05707	0.01950
<b>Mean</b>	<b>0.01313</b>	<b>0.05697</b>	<b>0.02130</b>
%RSD	1.90341	0.24247	11.94355

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:17

SampleId1 : 1109362-1A

SampleId2 :

[SAMPLE]

Analysis commenced : 10/10/2011 20:22:04

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : TUBE176

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00145	40.61225	1.93177	0.46709	2.33539	0.04965	-0.00471	122.00903	0.04701
#2	-0.00034	40.49611	1.93235	0.46978	2.32047	0.04950	-0.00002	122.29477	0.04653
<b>Mean</b>	<b>-0.00090</b>	<b>40.55418</b>	<b>1.93206</b>	<b>0.46843</b>	<b>2.32793</b>	<b>0.04958</b>	<b>-0.00236</b>	<b>122.15190</b>	<b>0.04677</b>
%RSD	87.00658	0.20251	0.02119	0.40648	0.45325	0.20696	140.36692	0.16541	0.73347

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.47468	0.20683	0.31131	104.78497	10.43811	0.04811	16.75447	2.16681	1.41805
#2	0.47484	0.20696	0.30928	104.82974	10.38798	0.04785	16.72789	2.16769	1.42147
<b>Mean</b>	<b>0.47476</b>	<b>0.20689</b>	<b>0.31029</b>	<b>104.80736</b>	<b>10.41305</b>	<b>0.04798</b>	<b>16.74118</b>	<b>2.16725</b>	<b>1.41976</b>
%RSD	0.02451	0.04326	0.46194	0.03020	0.34042	0.37464	0.11228	0.02892	0.17050

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.31767	0.50529	2.57975	0.60928	0.59331	25.24507	0.44794	1.90760	1.87333
#2	0.31550	0.50252	2.55049	0.61065	0.59305	25.15813	0.44775	1.90950	1.88247
<b>Mean</b>	<b>0.31658</b>	<b>0.50391</b>	<b>2.56512</b>	<b>0.60996</b>	<b>0.59318</b>	<b>25.20160</b>	<b>0.44784</b>	<b>1.90855</b>	<b>1.87790</b>
%RSD	0.48411	0.38862	0.80676	0.15884	0.03102	0.24395	0.03077	0.07055	0.34396

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	14.78441	0.49631	0.84689	0.07207	0.65267	1.90917	4.35353	1.47503	0.65909

#2	14.75740	0.49596	0.84215	0.07109	0.65121	1.88869	4.31879	1.47383	0.65968
<b>Mean</b>	<b>14.77091</b>	<b>0.49613</b>	<b>0.84452</b>	<b>0.07158</b>	<b>0.65194</b>	<b>1.89893</b>	<b>4.33616</b>	<b>1.47443</b>	<b>0.65939</b>
%RSD	0.12934	0.05078	0.39674	0.96769	0.15828	0.76260	0.56653	0.05768	0.06260

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	0.04098	0.59862	1.88474
#2	0.04124	0.59891	1.89147
<b>Mean</b>	<b>0.04111</b>	<b>0.59877</b>	<b>1.88811</b>
%RSD	0.45601	0.03339	0.25193

Method : Paragon File : 111010A  
**SampleId1 : 1110088-4** **SampleId2 :**  
**Analysis commenced : 10/10/2011 20:23:59**  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:17

[SAMPLE]

Position : TUBE177

# Final concentrations

	<b>Ag</b> ppm	<b>Al</b> ppm	<b>As</b> ppm	<b>B</b> ppm	<b>Ba</b> ppm	<b>Be</b> ppm	<b>Bi</b> ppm	<b>Ca</b> ppm	<b>Cd</b> ppm
#1	-0.00047	0.04478	0.00473	0.17532	0.02859	0.00056	-0.00402	508.74617	-0.00042
#2	-0.00037	0.03664	0.00417	0.17463	0.02849	0.00052	0.00117	507.27513	-0.00039
<b>Mean</b>	<b>-0.00042</b>	<b>0.04071</b>	<b>0.00445</b>	<b>0.17498</b>	<b>0.02854</b>	<b>0.00054</b>	<b>-0.00142</b>	<b>508.01065</b>	<b>-0.00040</b>
%RSD	17.21673	14.14104	9.01681	0.27871	0.26068	5.20336	257.71958	0.20476	6.67557

	<b>Co</b> ppm	<b>Cr</b> ppm	<b>Cu</b> ppm	<b>Fe</b> ppm	<b>K</b> ppm	<b>Li</b> ppm	<b>Mg</b> ppm	<b>Mn</b> ppm	<b>Mo</b> ppm
#1	-0.00085	-0.00043	-0.00250	0.00204	54.26480	0.05251	63.65427	0.00256	0.76350
#2	-0.00073	-0.00051	-0.00207	0.00111	53.91814	0.05218	63.45271	0.00248	0.76418
<b>Mean</b>	<b>-0.00079</b>	<b>-0.00047</b>	<b>-0.00228</b>	<b>0.00158</b>	<b>54.09147</b>	<b>0.05234</b>	<b>63.55349</b>	<b>0.00252</b>	<b>0.76384</b>
%RSD	10.87953	11.64766	13.43234	41.91105	0.45318	0.45265	0.22427	2.18710	0.06310

	<b>Na</b> ppm	<b>Ni</b> ppm	<b>P</b> ppm	<b>Pb I</b> ppm	<b>Pb II</b> ppm	<b>S</b> ppm	<b>Sb</b> ppm	<b>Se I</b> ppm	<b>Se II</b> ppm
#1	96.51801	-0.00074	0.33989	-0.00154	-0.00165	481.58854	0.00235	0.02764	0.02306
#2	95.86654	0.00000	0.34059	0.00017	0.00125	481.07921	0.00436	0.02001	0.02146
<b>Mean</b>	<b>96.19228</b>	<b>-0.00037</b>	<b>0.34024</b>	<b>-0.00068</b>	<b>-0.00020</b>	<b>481.33388</b>	<b>0.00336</b>	<b>0.02383</b>	<b>0.02226</b>
%RSD	0.47889	141.89630	0.14407	176.82697	1038.88727	0.07482	42.28331	22.63945	5.07975

	<b>Si</b> ppm	<b>Sn</b> ppm	<b>Sr</b> ppm	<b>Th</b> ppm	<b>Ti</b> ppm	<b>Tl</b> ppm	<b>U</b> ppm	<b>V</b> ppm	<b>Zn</b> ppm
#1	17.56514	0.00486	3.86263	-0.03233	-0.00305	0.00082	0.02864	0.00111	-0.00028
#2	17.49688	-0.00229	3.85023	-0.03473	-0.00305	0.00427	0.02114	0.00076	0.00059
<b>Mean</b>	<b>17.53101</b>	<b>0.00129</b>	<b>3.85643</b>	<b>-0.03353</b>	<b>-0.00305</b>	<b>0.00254</b>	<b>0.02489</b>	<b>0.00094</b>	<b>0.00016</b>
%RSD	0.27534	392.16282	0.22747	5.07945	0.00000	96.05850	21.30945	26.64022	389.42270

	<b>Zr</b> ppm	<b>Pb</b> calc	<b>Se</b> calc
#1	-0.00113	-0.00161	0.02458
#2	-0.00080	0.00089	0.02098

Mean -0.00096 -0.00036 0.02278UNDGREEN  
 %RSD 24.21711 492.45035 11.19591

Method : Paragon File : 111010A  
 SampleId1 : 1110088-5 SampleId2 :  
 Analysis commenced : 10/10/2011 20:25:57  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:18  
 [SAMPLE]  
 Position : TUBE178

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00043	0.04331	0.00540	0.17705	0.02916	0.00051	-0.00126	511.43667	-0.00038
#2	0.00001	0.03988	0.00426	0.17546	0.02909	0.00050	-0.00191	511.75913	-0.00039
Mean	-0.00021	0.04160	0.00483	0.17626	0.02912	0.00051	-0.00158	511.59790	-0.00038
%RSD	151.04934	5.84219	16.62073	0.63640	0.17034	2.00765	29.02020	0.04457	1.73946

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00079	-0.00089	-0.00174	-0.00377	55.19900	0.05340	64.42458	0.00428	0.76984
#2	-0.00048	-0.00022	-0.00148	-0.00387	54.93178	0.05312	64.34588	0.00443	0.77147
Mean	-0.00063	-0.00055	-0.00161	-0.00382	55.06539	0.05326	64.38523	0.00436	0.77066
%RSD	33.81992	86.41663	11.41929	1.92065	0.34314	0.36434	0.08644	2.53309	0.15012

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	97.49099	-0.00125	0.34937	-0.00102	0.00093	486.00441	0.00286	0.02406	0.01811
#2	96.91069	-0.00050	0.34544	-0.00168	-0.00031	486.53639	0.00376	0.02226	0.01760
Mean	97.20084	-0.00088	0.34740	-0.00135	0.00031	486.27040	0.00331	0.02316	0.01786
%RSD	0.42215	60.00933	0.79962	34.36730	280.31639	0.07736	19.17543	5.48380	2.01398

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	17.78964	-0.00193	3.90925	-0.03639	-0.00322	0.00309	0.03672	0.00132	-0.00028
#2	17.77302	-0.00300	3.90619	-0.04464	-0.00336	0.00346	0.03326	0.00083	-0.00144
Mean	17.78133	-0.00246	3.90772	-0.04052	-0.00329	0.00327	0.03499	0.00108	-0.00086
%RSD	0.06611	30.76973	0.05542	14.39227	3.13035	7.82377	6.99629	32.43020	95.70785

	Zr ppm	Pb calc	Se calc
#1	-0.00078	0.00028	0.02009
#2	-0.00035	-0.00076	0.01916
Mean	-0.00057	-0.00024	0.01962
%RSD	53.03850	302.66098	3.37772

Method : Paragon File : 111010A  
 SampleId1 : 1110088-18 SampleId2 :  
 Analysis commenced : 10/10/2011 20:27:52  
 Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:18  
 [SAMPLE]  
 Position : TUBE179



Final concentrations38:23 User: MIKE LUNDGREEN

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00062	0.03190	0.00076	0.17477	0.02849	0.00052	0.00036	507.00374	-0.00045
#2	0.00007	0.03207	0.00284	0.17677	0.02891	0.00048	-0.00386	509.17573	-0.00045
Mean	-0.00027	0.03199	0.00180	0.17577	0.02870	0.00050	-0.00175	508.08973	-0.00045
%RSD	179.20673	0.37594	81.64525	0.80462	1.03700	5.30147	170.87502	0.30228	0.46046
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00036	-0.00059	-0.00156	-0.00927	54.56283	0.05280	63.93582	0.00209	0.76364
#2	-0.00079	-0.00070	-0.00113	-0.00896	54.67280	0.05295	64.12808	0.00233	0.76963
Mean	-0.00057	-0.00064	-0.00134	-0.00912	54.61781	0.05287	64.03195	0.00221	0.76663
%RSD	52.15207	11.38466	22.85267	2.41557	0.14238	0.21247	0.21231	7.48763	0.55329
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	96.11252	0.00009	0.24610	-0.00037	0.00026	483.26183	0.00247	0.02529	0.01862
#2	96.25979	0.00033	0.23802	0.00174	-0.00129	485.02171	0.00564	0.02214	0.02131
Mean	96.18615	0.00021	0.24206	0.00068	-0.00052	484.14177	0.00405	0.02372	0.01997
%RSD	0.10826	80.33209	2.36127	218.44223	211.44425	0.25704	55.25507	9.37733	9.52364
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	17.66724	-0.00479	3.85083	-0.03487	-0.00321	0.00591	0.03096	0.00101	0.00001
#2	17.70208	-0.00121	3.87610	-0.03407	-0.00335	0.00427	0.02288	0.00111	0.00147
Mean	17.68466	-0.00300	3.86346	-0.03447	-0.00328	0.00509	0.02692	0.00106	0.00074
%RSD	0.13932	84.25201	0.46252	1.64594	2.95776	22.83426	21.22292	7.07564	138.93538
	Zr ppm	Pb calc	Se calc						
#1	-0.00125	0.00005	0.02084						
#2	-0.00099	-0.00028	0.02159						
Mean	-0.00112	-0.00012	0.02121						
%RSD	16.14334	197.77923	2.48716						

Method : Paragon File : 111010A  
SampleId1 : 1110088-19 SampleId2 :  
Analysis commenced : 10/10/2011 20:29:47  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:18

[SAMPLE]

Position : TUBE180

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00106	0.03383	0.00568	0.17512	0.02849	0.00052	-0.00321	510.35321	-0.00016
#2	-0.00022	0.02923	0.00502	0.17388	0.02873	0.00053	-0.00175	509.90423	-0.00061
Mean	-0.00064	0.03153	0.00535	0.17450	0.02861	0.00053	-0.00248	510.12872	-0.00039
%RSD	91.92925	10.32374	8.75255	0.50307	0.60677	0.93571	41.66220	0.06223	84.23644

ted: 10/11/2011 11:38:24 User: MIKE LUNDGREEN

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00085	-0.00089	-0.00156	-0.00813	54.35575	0.05264	64.13021	0.00256	0.76854
#2	0.00000	-0.00062	-0.00181	-0.00865	54.48985	0.05272	64.14339	0.00241	0.76984
Mean	-0.00042	-0.00075	-0.00168	-0.00839	54.42280	0.05268	64.13680	0.00248	0.76919
%RSD	142.11051	25.40809	10.77497	4.37467	0.17423	0.10081	0.01454	4.44290	0.11907

	Na	Ni	P	Pb I	Pb II	S	Sb	Se I	Se II
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	95.63124	0.00036	0.24679	-0.00083	-0.00087	484.92815	0.00318	0.02495	0.01869
#2	95.62298	0.00080	0.23455	0.00057	-0.00199	485.72784	0.00541	0.02484	0.01906
Mean	95.62711	0.00058	0.24067	-0.00013	-0.00143	485.32799	0.00430	0.02489	0.01888
%RSD	0.00610	54.27643	3.59619	770.70028	55.80501	0.11651	36.73915	0.31825	1.36079

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	17.69425	-0.00157	3.86138	-0.04076	-0.00365	-0.00110	0.02576	0.00090	-0.00057
#2	17.71386	0.00236	3.86480	-0.03937	-0.00341	0.00591	0.02576	0.00136	0.00088
Mean	17.70406	0.00040	3.86309	-0.04006	-0.00353	0.00240	0.02576	0.00113	0.00016
%RSD	0.07833	702.11959	0.06259	2.44661	4.97709	206.28115	0.00097	28.71840	649.03324

	Zr	Pb	Se
	ppm	calc	calc
#1	-0.00072	-0.00085	0.02078
#2	-0.00073	-0.00114	0.02098
Mean	-0.00072	-0.00100	0.02088
%RSD	1.06613	20.28336	0.69418

Method : Paragon File : 111010A  
SampleId1 : CCV SampleId2 :  
Analysis commenced : 10/10/2011 20:31:40  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:18  
[CV]

Position : STD6

Final concentrations

	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.19347	51.92502	0.50607	0.98294	0.95718	0.47230	0.51906	50.31253	0.49628
#2	0.19419	52.06217	0.50407	0.98294	0.95910	0.47426	0.52149	50.71784	0.49760
Mean	0.19383	51.99359	0.50507	0.98294	0.95814	0.47328	0.52027	50.51518	0.49694
%RSD	0.25976	0.18652	0.27953	0.00000	0.14164	0.29307	0.33111	0.56734	0.18716

	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.47708	0.94500	1.02803	19.71933	47.91740	0.48534	50.80424	0.93398	0.95954
#2	0.47903	0.95060	1.02485	19.83513	47.96037	0.48509	50.91327	0.93944	0.96630
Mean	0.47806	0.94780	1.02644	19.77723	47.93888	0.48521	50.85876	0.93671	0.96292
%RSD	0.28761	0.41766	0.21952	0.41400	0.06338	0.03657	0.15159	0.41218	0.49623

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	48.09684	0.97295	4.94168	0.97450	0.94898	5.22951	0.47615	0.99727	0.98083
#2	48.15899	0.97584	4.92460	0.97855	0.94004	5.21778	0.47837	1.00383	0.97490
Mean	48.12791	0.97440	4.93314	0.97652	0.94451	5.22364	0.47726	1.00055	0.97787
%RSD	0.09132	0.21000	0.24493	0.29336	0.66926	0.15873	0.32976	0.46360	0.42861

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.78165	1.04078	0.47823	0.34474	0.46971	0.52498	4.67122	0.47235	0.97231
#2	4.79417	1.05405	0.47953	0.34973	0.47163	0.52304	4.69082	0.47435	0.98635
Mean	4.78791	1.04742	0.47888	0.34724	0.47067	0.52401	4.68102	0.47335	0.97933
%RSD	0.18486	0.89562	0.19262	1.01531	0.28742	0.26182	0.29598	0.29949	1.01370

	Zr ppm	Pb calc	Se calc
#1	0.97583	0.95748	0.98630
#2	0.97896	0.95287	0.98453
Mean	0.97740	0.95517	0.98542
%RSD	0.22625	0.34154	0.12694

Method : Paragon File : 111010A  
SampleId1 : CCB SampleId2 :  
Analysis commenced : 10/10/2011 20:33:37  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:18  
[CB]

Position : STD2

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00079	0.06070	0.00048	-0.00263	-0.00048	0.00054	-0.00306	0.03708	-0.00026
#2	0.00057	0.08113	0.00218	-0.00146	-0.00002	0.00064	-0.00208	0.13850	-0.00001
Mean	-0.00011	0.07092	0.00133	-0.00204	-0.00025	0.00059	-0.00257	0.08779	-0.00013
%RSD	868.74648	20.37198	90.56666	40.57163	129.81307	12.33953	26.98655	81.68654	129.18712

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00107	-0.00081	-0.00315	0.00495	-0.07906	0.00380	-0.01054	-0.00009	-0.00076
#2	-0.00041	0.00053	-0.00222	0.01211	-0.05196	0.00391	0.02775	0.00030	0.00005
Mean	-0.00074	-0.00014	-0.00268	0.00853	-0.06551	0.00386	0.00861	0.00010	-0.00035
%RSD	63.82472	683.94034	24.49942	59.36855	29.25103	2.01264	314.63998	265.53092	163.08390

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	-0.03904	-0.00160	0.00101	-0.00525	0.00139	0.02432	-0.00302	0.00025	-0.00063
#2	-0.01568	-0.00044	0.00308	0.00198	0.00096	0.11757	0.00020	-0.00108	-0.00019
Mean	-0.02736	-0.00102	0.00205	-0.00164	0.00117	0.07094	-0.00141	-0.00041	-0.00041
%RSD	60.36546	80.03075	71.74017	311.97180	26.17477	92.93963	161.71227	228.84980	74.94298

	Si	Sn	Sr	Th	Ti	Tl	U	V	Zn
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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.02106	-0.00193	-0.00255	0.00032	-0.00167	0.00270	-0.01637	-0.00093	-0.00086
#2	-0.01337	-0.00050	-0.00152	-0.00337	-0.00162	-0.00111	-0.00195	0.00009	0.00001
<b>Mean</b>	<b>-0.01722</b>	<b>-0.00121</b>	<b>-0.00204</b>	<b>-0.00152</b>	<b>-0.00164</b>	<b>0.00080</b>	<b>-0.00916</b>	<b>-0.00042</b>	<b>-0.00042</b>
%RSD	31.59515	83.22476	35.69255	171.61093	1.84135	338.11651	111.32505	172.47752	145.76845

	Zr ppm	Pb calc	Se calc
#1	0.00105	-0.00082	-0.00034
#2	0.00196	0.00130	-0.00049
<b>Mean</b>	<b>0.00151</b>	<b>0.00024</b>	<b>-0.00041</b>
%RSD	42.67492	629.61629	26.17633

Method : Paragon File : 111010A  
SampleId1 : 1110088-20 SampleId2 :  
Analysis commenced : 10/10/2011 20:35:35  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:18

[SAMPLE]

Position : TUBE181

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	-0.00063	0.04269	0.00388	0.17505	0.02856	0.00056	-0.00110	506.64609	-0.00061
#2	-0.00072	0.04646	0.00606	0.17719	0.02870	0.00060	0.00020	501.80635	-0.00047
<b>Mean</b>	<b>-0.00067</b>	<b>0.04458</b>	<b>0.00497</b>	<b>0.17612</b>	<b>0.02863</b>	<b>0.00058</b>	<b>-0.00045</b>	<b>504.22622</b>	<b>-0.00054</b>
%RSD	10.19760	5.96928	30.94714	0.85843	0.34651	4.93357	204.95391	0.67871	18.37530

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00115	-0.00105	-0.00164	-0.00979	54.85235	0.05313	64.00388	0.00280	0.77147
#2	-0.00103	-0.00100	-0.00130	-0.01000	54.95225	0.05328	63.91158	0.00287	0.76513
<b>Mean</b>	<b>-0.00109</b>	<b>-0.00102</b>	<b>-0.00147</b>	<b>-0.00989</b>	<b>54.90230</b>	<b>0.05320</b>	<b>63.95773</b>	<b>0.00283</b>	<b>0.76830</b>
%RSD	7.89436	3.75342	16.45026	1.48366	0.12867	0.19964	0.10204	1.94631	0.58347

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	96.32597	0.00098	0.23525	-0.00304	-0.00055	481.97912	0.00499	0.02293	0.01978
#2	96.21544	0.00000	0.23086	-0.00340	0.00037	480.19672	0.00082	0.01598	0.01942
<b>Mean</b>	<b>96.27071</b>	<b>0.00049</b>	<b>0.23305</b>	<b>-0.00322</b>	<b>-0.00009</b>	<b>481.08792</b>	<b>0.00290</b>	<b>0.01946</b>	<b>0.01960</b>
%RSD	0.08118	141.06367	1.33130	7.94538	707.74088	0.26198	101.59292	25.25521	1.31087

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	17.62442	0.00272	3.89578	-0.03330	-0.00324	0.00281	0.02922	0.00030	0.00059
#2	17.60281	-0.00336	3.90006	-0.03613	-0.00334	-0.00156	0.02865	0.00030	0.00059
<b>Mean</b>	<b>17.61362</b>	<b>-0.00032</b>	<b>3.89792</b>	<b>-0.03472</b>	<b>-0.00329</b>	<b>0.00063</b>	<b>0.02894</b>	<b>0.00030</b>	<b>0.00059</b>
%RSD	0.08676	1346.05467	0.07765	5.74860	2.02552	490.99223	1.40971	0.00949	0.00000

	Zr ppm	Pb calc	Se calc
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#1	0.00090	-0.00138	0.02083	UNDGREEN
#2	0.00078	-0.00089	0.01828	
Mean	0.00084	-0.00113	0.01955	
%RSD	9.89009	30.48077	9.24563	

Method : Paragon File : 111010A  
SampleId1 : 1110088-26 SampleId2 :  
Analysis commenced : 10/10/2011 20:37:29  
Dilution ratio : 1.00000 to 1.00000 Tray :

Printed : 10/11/2011 11:38:19

[SAMPLE]

Position : TUBE182

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00048	0.05033	0.00105	0.17912	0.03403	0.00064	0.00311	526.02495	-0.00072
#2	0.00053	0.04263	-0.00094	0.17939	0.03407	0.00061	-0.00110	526.97530	-0.00008
Mean	0.00051	0.04648	0.00005	0.17926	0.03405	0.00063	0.00101	526.50012	-0.00040
%RSD	6.12198	11.70598	2681.50040	0.10883	0.07285	3.20952	296.65229	0.12763	114.55180

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	-0.00066	-0.00065	-0.00102	-0.00003	34.19210	0.05242	67.11593	0.00241	0.79431
#2	-0.00011	0.00002	-0.00085	0.00038	34.09362	0.05238	67.15597	0.00248	0.79459
Mean	-0.00038	-0.00032	-0.00093	0.00017	34.14286	0.05240	67.13595	0.00244	0.79445
%RSD	100.34638	149.51258	12.44450	167.90535	0.20395	0.06237	0.04218	2.25690	0.02427

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	96.15685	0.00042	0.24818	0.00220	-0.00191	495.80055	0.00462	0.02425	0.01935
#2	96.06749	0.00077	0.24772	0.00469	-0.00220	495.27444	0.00306	0.02336	0.02080
Mean	96.11217	0.00060	0.24795	0.00345	-0.00205	495.53750	0.00384	0.02380	0.02008
%RSD	0.06574	42.33788	0.13173	51.04337	10.01614	0.07507	28.76047	2.64336	5.11885

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	17.79135	-0.00050	4.04541	-0.04002	-0.00325	0.00280	-0.00829	0.00111	0.00263
#2	17.81414	-0.00050	4.04138	-0.03485	-0.00340	0.00417	0.00037	0.00129	0.00495
Mean	17.80275	-0.00050	4.04340	-0.03744	-0.00332	0.00348	-0.00396	0.00120	0.00379
%RSD	0.09053	0.02406	0.07046	9.76435	3.09807	27.83828	154.51824	10.38849	43.36554

	Zr ppm	Pb calc	Se calc
#1	-0.00012	-0.00054	0.02098
#2	-0.00031	0.00010	0.02165
Mean	-0.00022	-0.00022	0.02132
%RSD	63.92167	203.45061	2.23264

Method : Paragon File : 111010A  
SampleId1 : 1109301-1A 10X SampleId2 :  
Analysis commenced : 10/10/2011 20:39:22

Printed : 10/11/2011 11:38:19

[SAMPLE]

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : TUBE183

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.00288	3.80115	2.15632	0.46819	2.00834	0.04772	-0.00132	3.28655	0.04750
#2	0.00298	3.86049	2.16493	0.47171	2.02739	0.04778	0.00032	3.26539	0.04746
<b>Mean</b>	<b>0.00293</b>	<b>3.83082</b>	<b>2.16062</b>	<b>0.46995</b>	<b>2.01786</b>	<b>0.04775</b>	<b>-0.00050</b>	<b>3.27597</b>	<b>0.04748</b>
%RSD	2.48470	1.09532	0.28177	0.52983	0.66731	0.09512	232.14574	0.45686	0.06224
	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.47662	0.35289	0.29912	32.31371	0.65243	0.00551	1.12094	7.40846	0.97312
#2	0.47804	0.35310	0.30255	32.23087	0.64497	0.00550	1.12053	7.39134	0.97647
<b>Mean</b>	<b>0.47733</b>	<b>0.35300</b>	<b>0.30083</b>	<b>32.27229</b>	<b>0.64870</b>	<b>0.00550</b>	<b>1.12073</b>	<b>7.39990</b>	<b>0.97479</b>
%RSD	0.21028	0.04374	0.80538	0.18151	0.81339	0.07423	0.02600	0.16355	0.24264
	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	0.40933	0.49648	0.37132	0.47766	0.45522	0.42361	0.45779	1.92228	1.82208
#2	0.41381	0.49532	0.36578	0.47896	0.46005	0.44693	0.46027	1.90166	1.83653
<b>Mean</b>	<b>0.41157</b>	<b>0.49590</b>	<b>0.36855</b>	<b>0.47831</b>	<b>0.45764</b>	<b>0.43527</b>	<b>0.45903</b>	<b>1.91197</b>	<b>1.82930</b>
%RSD	0.77047	0.16560	1.06424	0.19203	0.74569	3.78869	0.38125	0.76264	0.55835
	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.85236	0.50248	0.53027	0.01800	0.58163	1.93013	-0.01298	0.62127	0.62991
#2	4.88628	0.50355	0.53356	0.01678	0.58434	1.93706	-0.01696	0.62267	0.62816
<b>Mean</b>	<b>4.86932</b>	<b>0.50302</b>	<b>0.53192</b>	<b>0.01739</b>	<b>0.58298</b>	<b>1.93360</b>	<b>-0.01497</b>	<b>0.62197</b>	<b>0.62903</b>
%RSD	0.49249	0.15053	0.43804	4.96387	0.32790	0.25365	18.81043	0.15931	0.19682
	Zr ppm	Pb calc	Se calc						
#1	0.00291	0.46269	1.85545						
#2	0.00237	0.46635	1.85822						
<b>Mean</b>	<b>0.00264</b>	<b>0.46452</b>	<b>1.85683</b>						
%RSD	14.26329	0.55585	0.10540						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:19

SampleId1 : CRI

SampleId2 :

[FLEXQC]

Analysis commenced : 10/10/2011 20:41:15

Dilution ratio : 1.00000 to 1.00000

Tray :

Position : STD3

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.02071	0.52097	0.01315	0.41241	0.40769	0.01253	0.05334	5.51036	0.01203
#2	0.02045	0.52494	0.01268	0.41773	0.40984	0.01255	0.05707	5.53081	0.01262

<b>Mean</b>	<b>0.02058</b>	<b>0.52296</b>	<b>0.01291</b>	<b>0.41507</b>	<b>0.40877</b>	<b>0.01254</b>	<b>0.05520</b>	<b>5.52059</b>	<b>0.01232</b>
<b>%RSD</b>	0.87522	0.53735	2.58930	0.90554	0.37213	0.08470	4.78349	0.26195	3.36730
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.10300	0.02173	0.05255	0.21056	3.82126	0.01992	5.36696	0.03245	0.02155
#2	0.10343	0.02148	0.05237	0.21097	3.85082	0.02010	5.39091	0.03237	0.02060
<b>Mean</b>	<b>0.10322</b>	<b>0.02161</b>	<b>0.05246</b>	<b>0.21076</b>	<b>3.83604</b>	<b>0.02001</b>	<b>5.37893</b>	<b>0.03241</b>	<b>0.02108</b>
<b>%RSD</b>	0.29279	0.80814	0.23844	0.13954	0.54488	0.62279	0.31485	0.17029	3.18543
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	4.17121	0.08623	0.20061	0.00437	0.00681	0.28952	0.12753	0.01339	0.01379
#2	4.20743	0.08662	0.20315	0.00563	0.00829	0.29535	0.12375	0.02024	0.01154
<b>Mean</b>	<b>4.18932</b>	<b>0.08643</b>	<b>0.20188</b>	<b>0.00500</b>	<b>0.00755</b>	<b>0.29243</b>	<b>0.12564</b>	<b>0.01681</b>	<b>0.01267</b>
<b>%RSD</b>	0.61148	0.31621	0.88960	17.82861	13.81654	1.40956	2.13191	28.77859	12.57396
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.09599	0.10744	0.01960	0.01297	0.01972	0.02224	0.18315	0.10382	0.05873
#2	0.09898	0.10672	0.01965	0.01469	0.01980	0.02516	0.19065	0.10371	0.06076
<b>Mean</b>	<b>0.09749</b>	<b>0.10708</b>	<b>0.01963</b>	<b>0.01383</b>	<b>0.01976</b>	<b>0.02370</b>	<b>0.18690</b>	<b>0.10376</b>	<b>0.05974</b>
<b>%RSD</b>	2.16454	0.47228	0.17319	8.79082	0.27586	8.70526	2.83819	0.07214	2.40859
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.05012	0.00600	0.01366						
#2	0.05119	0.00740	0.01444						
<b>Mean</b>	<b>0.05066</b>	<b>0.00670</b>	<b>0.01405</b>						
<b>%RSD</b>	1.49973	14.81342	3.90760						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:19

SampleId1 : ICSA

SampleId2 :

[FLEXQC]

Analysis commenced : 10/10/2011 20:43:12

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD4

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00050	277.71671	-0.00217	-0.00359	-0.00048	0.00128	0.00295	275.47771	0.00024
#2	-0.00010	275.56205	-0.00633	-0.00456	-0.00041	0.00125	0.00522	274.86833	0.00008
<b>Mean</b>	<b>-0.00030</b>	<b>276.63938</b>	<b>-0.00425</b>	<b>-0.00408</b>	<b>-0.00044</b>	<b>0.00126</b>	<b>0.00409</b>	<b>275.17302</b>	<b>0.00016</b>
<b>%RSD</b>	95.02950	0.55074	69.22075	16.74221	11.24061	1.44250	39.27514	0.15659	70.33616
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.00086	-0.00081	-0.00678	108.52393	-0.10865	0.00401	276.00943	0.00178	-0.00184
#2	0.00117	-0.00094	-0.00660	108.25576	-0.10187	0.00402	275.00082	0.00155	-0.00151
<b>Mean</b>	<b>0.00101</b>	<b>-0.00087</b>	<b>-0.00669</b>	<b>108.38984</b>	<b>-0.10526</b>	<b>0.00402</b>	<b>275.50513</b>	<b>0.00166</b>	<b>-0.00168</b>

%RSD	21.09397	10.51383	1.88760	0.17495	4.55110	0.25425	0.25887	9.94467	14.31207
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.02806	0.00057	0.00631	-0.01070	0.00397	0.04763	0.00231	-0.01393	0.00108
#2	-0.02643	-0.00024	-0.00176	-0.01091	0.00522	0.06803	-0.00347	-0.00124	-0.00195
<b>Mean</b>	<b>-0.02724</b>	<b>0.00016</b>	<b>0.00228</b>	<b>-0.01080</b>	<b>0.00459</b>	<b>0.05783</b>	<b>-0.00058</b>	<b>-0.00758</b>	<b>-0.00044</b>
%RSD	4.23285	344.50395	250.72088	1.36264	19.27995	24.94042	708.54027	118.35245	489.87809
	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.02564	0.00164	-0.00149	-0.02943	0.00002	-0.00070	0.03149	-0.00510	-0.00173
#2	-0.02455	0.00200	-0.00141	-0.02681	0.00028	0.00282	0.02187	-0.00465	-0.00202
<b>Mean</b>	<b>-0.02510</b>	<b>0.00182</b>	<b>-0.00145</b>	<b>-0.02812</b>	<b>0.00015</b>	<b>0.00106</b>	<b>0.02668</b>	<b>-0.00488</b>	<b>-0.00188</b>
%RSD	3.06180	13.86486	4.21522	6.59499	121.26840	235.70652	25.51592	6.41052	10.95388
	<b>Zr</b>	<b>Pb</b>	<b>Se</b>						
	ppm	calc	calc						
#1	0.00544	-0.00092	-0.00392						
#2	0.00519	-0.00015	-0.00171						
<b>Mean</b>	<b>0.00531</b>	<b>-0.00053</b>	<b>-0.00282</b>						
%RSD	3.31409	101.39986	55.30562						

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:19

SampleId1 : ICSAB

SampleId2 :

[FLEXQC]

Analysis commenced : 10/10/2011 20:45:09

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD5

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.19374	217.30109	0.09698	0.98280	0.48595	0.46190	0.54109	264.96885	0.99490
#2	0.19428	215.99869	0.09907	0.98072	0.48433	0.46252	0.53718	265.43608	0.99291
<b>Mean</b>	<b>0.19401</b>	<b>216.64989</b>	<b>0.09803</b>	<b>0.98176</b>	<b>0.48514</b>	<b>0.46221</b>	<b>0.53914</b>	<b>265.20246</b>	<b>0.99391</b>
%RSD	0.19855	0.42508	1.50229	0.14947	0.23670	0.09552	0.51319	0.12458	0.14206
	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	0.46049	0.45011	0.54071	105.13966	-0.13191	1.01964	268.99190	0.45696	0.94309
#2	0.46164	0.45042	0.53661	105.30302	-0.12016	1.01082	268.41675	0.45743	0.94834
<b>Mean</b>	<b>0.46107</b>	<b>0.45027</b>	<b>0.53866</b>	<b>105.22134</b>	<b>-0.12603</b>	<b>1.01523</b>	<b>268.70432</b>	<b>0.45720</b>	<b>0.94572</b>
%RSD	0.17691	0.04779	0.53822	0.10978	6.58798	0.61394	0.15135	0.07290	0.39293
	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.05266	0.95505	0.98632	0.03419	0.05009	1.06518	0.58243	0.04015	0.05518
#2	-0.04724	0.95505	0.97704	0.03993	0.05127	1.10603	0.58036	0.03295	0.04976
<b>Mean</b>	<b>-0.04995</b>	<b>0.95505</b>	<b>0.98168</b>	<b>0.03706</b>	<b>0.05068</b>	<b>1.08560</b>	<b>0.58140</b>	<b>0.03655</b>	<b>0.05247</b>
%RSD	7.67044	0.00000	0.66834	10.94008	1.64179	2.66035	0.25222	13.93889	7.30079



ted: 10/11/2011 11:38:24 User: MIKE LUNDGREEN

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	0.90584	1.04709	0.96118	0.09052	0.90492	0.10260	9.44945	0.45928	0.90798
#2	0.90792	1.05068	0.95909	0.07887	0.90461	0.10156	9.43657	0.45881	0.90739
<b>Mean</b>	<b>0.90688</b>	<b>1.04888</b>	<b>0.96014</b>	<b>0.08469</b>	<b>0.90477</b>	<b>0.10208</b>	<b>9.44301</b>	<b>0.45905</b>	<b>0.90768</b>
%RSD	0.16211	0.24179	0.15323	9.72702	0.02417	0.71435	0.09642	0.07145	0.04555

	Zr ppm	Pb calc	Se calc
#1	0.48102	0.04480	0.05018
#2	0.48240	0.04749	0.04416
<b>Mean</b>	<b>0.48171</b>	<b>0.04615</b>	<b>0.04717</b>
%RSD	0.20268	4.12849	9.01358

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:20

SampleId1 : CCV

SampleId2 :

[CV]

Analysis commenced : 10/10/2011 20:47:07

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD6

Final concentrations

	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm
#1	0.19224	51.41984	0.49713	0.97699	0.94517	0.46472	0.52404	50.09838	0.49669
#2	0.19175	51.51768	0.49856	0.98003	0.94748	0.46620	0.52892	50.17348	0.49758
<b>Mean</b>	<b>0.19200</b>	<b>51.46876</b>	<b>0.49785</b>	<b>0.97851</b>	<b>0.94633</b>	<b>0.46546</b>	<b>0.52648</b>	<b>50.13593</b>	<b>0.49714</b>
%RSD	0.18059	0.13441	0.20255	0.21995	0.17259	0.22521	0.65510	0.10592	0.12697

	Co ppm	Cr ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm
#1	0.47174	0.93298	1.01742	19.55999	47.48079	0.48035	50.32594	0.92084	0.95353
#2	0.47368	0.93589	1.02052	19.60184	47.57887	0.48134	50.41719	0.92377	0.95790
<b>Mean</b>	<b>0.47271</b>	<b>0.93444</b>	<b>1.01897</b>	<b>19.58091</b>	<b>47.52983</b>	<b>0.48085</b>	<b>50.37157</b>	<b>0.92230</b>	<b>0.95572</b>
%RSD	0.29129	0.22006	0.21503	0.15113	0.14592	0.14506	0.12811	0.22443	0.32320

	Na ppm	Ni ppm	P ppm	Pb I ppm	Pb II ppm	S ppm	Sb ppm	Se I ppm	Se II ppm
#1	48.04986	0.97963	4.89327	0.96521	0.93392	5.10346	0.47811	0.98404	0.96794
#2	48.15538	0.98026	4.92673	0.96636	0.92175	5.13278	0.47879	0.99374	0.97155
<b>Mean</b>	<b>48.10262</b>	<b>0.97995</b>	<b>4.91000</b>	<b>0.96578</b>	<b>0.92783</b>	<b>5.11812</b>	<b>0.47845</b>	<b>0.98889</b>	<b>0.96975</b>
%RSD	0.15510	0.04521	0.48186	0.08449	0.92763	0.40495	0.09974	0.69388	0.26309

	Si ppm	Sn ppm	Sr ppm	Th ppm	Ti ppm	Tl ppm	U ppm	V ppm	Zn ppm
#1	4.68885	1.03075	0.47405	0.33548	0.46019	0.51826	4.65166	0.46917	0.95885
#2	4.71058	1.03721	0.47535	0.34325	0.46096	0.51609	4.63485	0.46850	0.95944
<b>Mean</b>	<b>4.69972</b>	<b>1.03398</b>	<b>0.47470</b>	<b>0.33937</b>	<b>0.46057</b>	<b>0.51718</b>	<b>4.64325</b>	<b>0.46883</b>	<b>0.95915</b>
%RSD	0.32702	0.44136	0.19284	1.62009	0.11722	0.29712	0.25596	0.10022	0.04312

	<b>Zr</b>	<b>Pb</b>	<b>SeUNDGREEN</b>
	ppm	calc	calc
#1	0.96724	0.94434	0.97330
#2	0.96984	0.93660	0.97894
<b>Mean</b>	<b>0.96854</b>	<b>0.94047</b>	<b>0.97612</b>
<b>%RSD</b>	<b>0.18994</b>	<b>0.58152</b>	<b>0.40842</b>

Method : Paragon

File : 111010A

Printed : 10/11/2011 11:38:20

SampleId1 : CCB

SampleId2 :

[CB]

Analysis commenced : 10/10/2011 20:49:14

Dilution ratio : 1.00000 to 1.00000 Tray :

Position : STD2

Final concentrations

	<b>Ag</b>	<b>Al</b>	<b>As</b>	<b>B</b>	<b>Ba</b>	<b>Be</b>	<b>Bi</b>	<b>Ca</b>	<b>Cd</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00035	0.07243	0.00076	-0.00201	-0.00048	0.00054	-0.00500	0.01810	-0.00041
#2	-0.00016	0.10795	-0.00141	-0.00097	-0.00016	0.00063	0.00344	0.06152	0.00024
<b>Mean</b>	<b>-0.00025</b>	<b>0.09019</b>	<b>-0.00033</b>	<b>-0.00149</b>	<b>-0.00032</b>	<b>0.00058</b>	<b>-0.00078</b>	<b>0.03981</b>	<b>-0.00009</b>
<b>%RSD</b>	<b>54.21939</b>	<b>27.84808</b>	<b>471.92042</b>	<b>49.03977</b>	<b>70.07792</b>	<b>10.46472</b>	<b>760.79764</b>	<b>77.12589</b>	<b>517.16240</b>

	<b>Co</b>	<b>Cr</b>	<b>Cu</b>	<b>Fe</b>	<b>K</b>	<b>Li</b>	<b>Mg</b>	<b>Mn</b>	<b>Mo</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.00059	-0.00076	-0.00306	0.00692	-0.06325	0.00382	-0.00807	-0.00009	-0.00069
#2	0.00002	0.00046	-0.00272	0.02083	-0.05851	0.00389	0.03434	0.00014	0.00026
<b>Mean</b>	<b>-0.00029</b>	<b>-0.00015</b>	<b>-0.00289</b>	<b>0.01388</b>	<b>-0.06088</b>	<b>0.00386</b>	<b>0.01314</b>	<b>0.00003</b>	<b>-0.00022</b>
<b>%RSD</b>	<b>150.31765</b>	<b>573.77275</b>	<b>8.34000</b>	<b>70.88054</b>	<b>5.50822</b>	<b>1.37707</b>	<b>228.31087</b>	<b>639.92586</b>	<b>309.06860</b>

	<b>Na</b>	<b>Ni</b>	<b>P</b>	<b>Pb I</b>	<b>Pb II</b>	<b>S</b>	<b>Sb</b>	<b>Se I</b>	<b>Se II</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.05371	-0.00077	0.00723	0.00025	-0.00129	-0.01064	0.00032	-0.00322	-0.00252
#2	-0.04777	-0.00151	-0.00199	-0.00065	-0.00108	-0.00773	-0.00113	0.00205	-0.00259
<b>Mean</b>	<b>-0.05074</b>	<b>-0.00114</b>	<b>0.00262</b>	<b>-0.00020</b>	<b>-0.00119</b>	<b>-0.00919</b>	<b>-0.00041</b>	<b>-0.00058</b>	<b>-0.00255</b>
<b>%RSD</b>	<b>8.28580</b>	<b>45.96588</b>	<b>248.73878</b>	<b>311.73457</b>	<b>12.78131</b>	<b>22.42588</b>	<b>253.19977</b>	<b>636.73482</b>	<b>1.93350</b>

	<b>Si</b>	<b>Sn</b>	<b>Sr</b>	<b>Th</b>	<b>Ti</b>	<b>Tl</b>	<b>U</b>	<b>V</b>	<b>Zn</b>
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
#1	-0.02406	0.00307	-0.00274	0.00084	-0.00161	0.00625	-0.01464	0.00006	-0.00057
#2	-0.02213	-0.00050	-0.00252	0.00240	-0.00137	0.00107	-0.01350	0.00034	-0.00202
<b>Mean</b>	<b>-0.02310</b>	<b>0.00129</b>	<b>-0.00263</b>	<b>0.00162</b>	<b>-0.00149</b>	<b>0.00366</b>	<b>-0.01407</b>	<b>0.00020</b>	<b>-0.00129</b>
<b>%RSD</b>	<b>5.90715</b>	<b>196.37381</b>	<b>5.93595</b>	<b>68.45743</b>	<b>11.34563</b>	<b>100.01884</b>	<b>5.75302</b>	<b>101.54319</b>	<b>79.35604</b>

	<b>Zr</b>	<b>Pb</b>	<b>Se</b>
	ppm	calc	calc
#1	0.00125	-0.00078	-0.00275
#2	0.00145	-0.00094	-0.00105
<b>Mean</b>	<b>0.00135</b>	<b>-0.00086</b>	<b>-0.00190</b>
<b>%RSD</b>	<b>10.54445</b>	<b>12.91549</b>	<b>63.58053</b>

### Header Information for Analytical Sequence 11J12100

Instrument: Agilent ICPMS Model 7700X; Serial No. JP09400112

Software Revision: B.01.01

Date of Analysis: 10/12/2011

Analyst: Ross Miller

### Calibration Standards

High Calibration Standard: ST100324-6 (expires 2/28/2015)

This standard contains the following elements at the listed concentrations (ng/ml).

100000	50000	10000	5000	2000	1000	500	200	100	50	30	10	2
Na	Ca	Mg	Fe	Zn	B	Cr	Mn	V	Pb	Sb	Th	Tl
	K		Al	Ti	Cu	Ni		Co	Be	Cd	U	
					Li	Sn		As		Y	Ag	
								Se		La		
								Mo		Ce		
								Ba		Pr		
								Sr		Nd		

1/10, 1/100, and 1/1000 dilutions of the High Calibration Standard are prepared daily to provide additional calibration standards.

### ICV

The ICV is prepared by diluting 1ml of the 2<sup>nd</sup> Source intermediate (ST110707-8, expires 06/20/2012) to 5ml giving the following concentrations (ng/ml).

20000	10000	2000	1000	400	200	100	40	20	10	6	2	0.4
Na	Ca	Mg	Fe	Zn	B	Cr	Mn	V	Pb	Sb	Th	Tl
	K		Al	Ti	Cu	Ni		Co	Be	Cd	U	
					Li	Sn		As		Y	Ag	
								Se		La		
								Mo		Ce		
								Ba		Pr		
								Sr		Nd		

### CRI1

The RL1 is prepared by diluting 0.05ml of the Reporting Limit Verification Spike Solution (ST100324-9 expires 2/28/2015) to 50ml giving the following concentrations (ng/ml).

100	50	10	5	2	1	0.5	0.2	0.1	0.05	0.03	0.02	0.01
Na	Ca	Mg	Al	Zn	B	Cr	Mn	V	Pb	Sb	Th	U
	K		Fe	Ti	Cu	Ni		Co	Be	Cd	Tl	Ag
					Li	Sn		As		Y		
								Se		La		
								Mo		Ce		
								Ba		Pr		
								Sr		Nd		

### CRI2

The RL2 is prepared by diluting 0.1ml of the Reporting Limit Verification Spike Solution (ST100324-9 expires 2/28/2015) to 50ml giving the following concentrations (ng/ml).

200	100	20	10	4	2	1	0.4	0.2	0.1	0.06	0.04	0.02
Na	Ca	Mg	Al	Zn	B	Cr	Mn	V	Pb	Sb	Th	U
	K		Fe	Ti	Cu	Ni		Co	Be	Cd	Tl	Ag
					Li	Sn		As		Y		
								Se		La		
								Mo		Ce		
								Ba		Pr		
								Sr		Nd		

### ICSA

The ICSA is prepared by diluting 0.5ml of ICSA intermediate (ST101101-1, expires 11/01/11) to a final volume of 50ml giving the following concentrations (ng/ml).

42.5 X 10 <sup>6</sup>	30000	25000	20000	10000	200
Cl	Ca	Fe	C	Al	Mo
		Na		K	Ti
				Mg	
				P	
				S	

### ICSAB

The ICSAB is prepared by diluting 0.5ml of ICSA intermediate (ST101101-1, expires 11/01/11) and 5ml of High Calibration Standard: ST100324-6 (expires 2/28/2015) to a final volume of 50ml. The ICSAB contains the following elements at the listed concentrations (ng/ml).

42.5X10 <sup>6</sup>	35000	25500	20000	15000	11000	10500	10000	400	210
Cl	Ca	Fe	C	K	Mg	Al	P	Ti	Mo
	Na						S		

200	100	50	20	10	5	3	1	0.2
Zn	B	Cr	Mn	V	Pb	Sb	Th	Tl
	Cu	Ni		Co	Be	Cd	U	
	Li	Sn		As		Y	Ag	
				Se		La		
				Ba		Ce		
				Sr		Pr		
						Nd		

### CCV

The CCV is prepared by diluting 5ml of the High Calibration Standard: ST100324-6 (expires 2/28/2015) to a final volume of 50ml. The CCV contains the following elements at the listed concentrations (ng/ml).

10000	5000	1000	500	200	100	50	20	10	5	3	1	0.2
Na	Ca	Mg	Fe	Zn	B	Cr	Mn	V	Pb	Sb	Th	Tl
	K		Al	Ti	Cu	Ni		Co	Be	Cd	U	
					Li	Sn		As		Y	Ag	
								Se		La		
								Mo		Ce		
								Ba		Pr		
								Sr		Nd		

### Linear Dynamic Range Standards

#### LDR-Ca,Na,K

The LDR-Ca,Na,K standard is prepared by diluting 1ml of the High Calibration Standard Intermediate Mix (ST100324-5, expires 2/28/2015) to a final volume of 10ml. The LDR-Ca,Na,K standard contains the following elements at the listed concentrations (ng/ml).

100000	50000	20000	10000	5000	2000	1000	500	300	100	20
Mg	Fe	Zn	B	Cr	Mn	V	Pb	Sb	Th	Tl
	Al	Ti	Cu	Ni		Co	Be	Cd	U	
			Li	Sn		As		Y	Ag	
						Se		La		
						Mo		Ce		
						Ba		Pr		
						Sr		Nd		

#### 1000 Na

The 1000 Na standard is prepared by diluting 1ml of the 10000mg/L Na stock solution (ST100301-26, expires 2/28/2015) to a final volume of 10ml. The 1000 Na standard contains Na at 100000 ng/ml.

### 500 Ca

The 500 Ca standard is prepared by diluting 0.5ml of the 10000mg/L Ca stock solution (ST100301-9, expires 2/28/2015) to a final volume of 10ml. The 500 Ca standard contains Ca at 50000 ng/ml.

### 500 K

The 500 K standard is prepared by diluting 0.5ml of the 10000mg/L K stock solution (ST100301-22, expires 2/28/2015) to a final volume of 10ml. The 500 K standard contains K at 50000 ng/ml.

### Linear Dynamic Range

The instrument Linear Dynamic Range (LDR) is determined at least every 6 months. The current LDR was determined on 9/22/2010. The file containing the LDR data is 10I22m00. The instrument LDR is given below (ng/ml).

1000000	500000	100000	50000	20000	10000	5000	2000	1000	500	300	100	20
Na	Ca	Mg	Fe	Zn	B	Cr	Mn	V	Pb	Sb	Th	Tl
	K		Al	Ti	Cu	Ni		Co	Be	Cd	U	
					Li	Sn		As		Y	Ag	
								Se		La		
								Mo		Ce		
								Ba		Pr		
								Sr		Nd		

### ICB/CCB and all diluent

1% HNO<sub>3</sub>, 1%HCl in double deionized water

HNO<sub>3</sub> Lot No. J29049

HCl Lot No. J34056

### Internal Standards

Internal standards are introduced continuously using a second channel on the peristaltic pump. The internal standard solution is prepared from 1000mg/L stock solutions. The internal standard solution contains the following elements at the listed concentrations (ng/ml).

<u>500</u>	<u>100</u>	<u>50</u>
Li	Rh	Bi
Ga	In	
Ge	Pt	

### Pipet ID Numbers

1.0 to 5.0 ml -- M-55  
0.1 to 1.0ml -- M-61  
0.01 to 0.1ml -- M-57  
0.5ml -- M-14

### Dilutions

2X dilutions made by diluting 5ml of sample to 10ml final volume  
5X dilutions made by diluting 1ml of sample to 5ml final volume  
10X dilutions made by diluting 1ml of sample to 10ml final volume  
50X dilutions made by diluting 0.1ml of sample to 5ml final volume  
100X dilutions made by diluting 0.1ml of sample to 10ml final volume  
200X dilutions made by diluting 0.05ml of sample to 10ml final volume  
500X dilutions made by diluting 0.02ml of sample to 10ml final volume

### Analytical Spikes

None in this sequence.

### Daily Maintenance Items

1. Check / change pump tubing
2. Check / clean drain containers
3. Tune instrument per manufacturer's procedures
4. Perform resolution / mass calibration / stability test and print QC tune report



Monthly Maintenance Items

1. Check / clean torch and cones
2. Check / clean nebulizer and spray chamber
3. Check / fill water recirculating reservoir
4. Check / fill vacuum pump oil

Additional Comments

No additional comments.

## QC Tune Report

Data File: C:\ICPMH\1\7500\QCTUNE.D  
Date Acquired: 12 Oct 2011 11:27:20 am  
Operator:  
Misc Info:  
Vial Number: 0  
Current Method: C:\ICPMH\1\METHODS\2008TUNE.m

## Minimum Response (CPS)

Element	Actual	Required	Flag
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## RSD (%)

Element	Actual	Required	Flag
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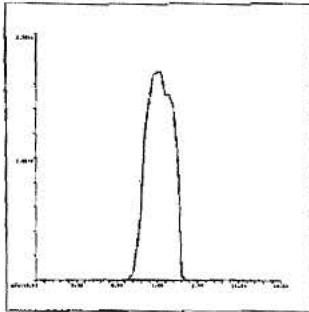
9 Be	4.31	5.00	
24 Mg	0.24	5.00	
25 Mg	1.25	5.00	
26 Mg	1.82	5.00	
59 Co	0.51	5.00	
115 In	0.29	5.00	
206 Pb	1.32	5.00	
207 Pb	1.62	5.00	
208 Pb	0.49	5.00	

## Ion Ratio

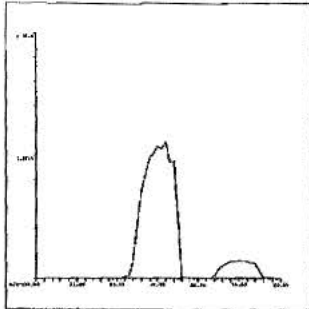
Element	Actual	Required	Flag
---------	--------	----------	------

## Maximum Bkg. Count (CPS)

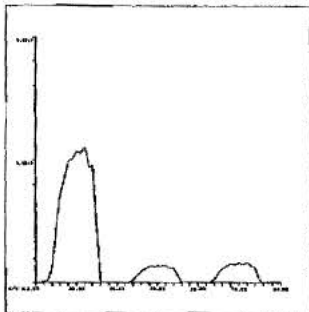
Element	Actual	Required	Flag
---------	--------	----------	------



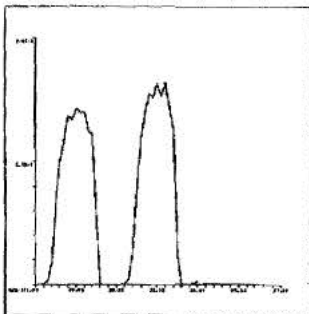
9 Be  
Mass Calib.  
Actual: 9.05  
Required: 8.90-9.10  
Flag:  
Peak Width  
Actual: 0.50  
Required: 0.80  
Flag:



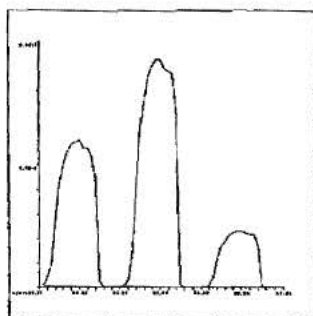
24 Mg  
Mass Calib.  
Actual: 24.00  
Required: 23.90-24.10  
Flag:  
Peak Width  
Actual: 0.55  
Required: 0.80  
Flag:



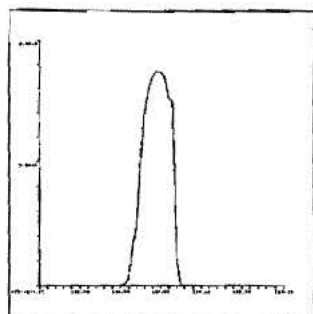
25 Mg  
Mass Calib.  
Actual: 25.00  
Required: 24.90-25.10  
Flag:  
Peak Width  
Actual: 0.55  
Required: 0.80  
Flag:



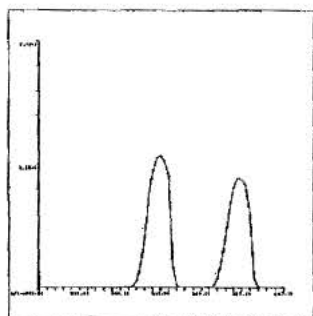
26 Mg  
Mass Calib.  
Actual: 26.00  
Required: 25.90-26.10  
Flag:  
Peak Width  
Actual: 0.55  
Required: 0.80  
Flag:



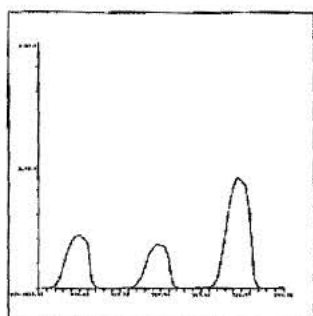
59 Co  
Mass Calib.  
Actual: 59.00  
Required: 58.90-59.10  
Flag:  
Peak Width  
Actual: 0.55  
Required: 0.80  
Flag:



115 In  
Mass Calib.  
Actual: 114.95  
Required: 114.90-115.10  
Flag:  
Peak Width  
Actual: 0.55  
Required: 0.80  
Flag:

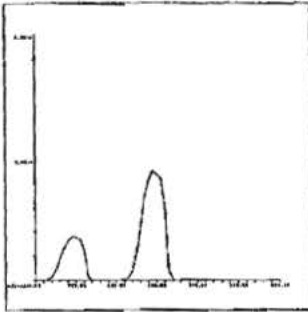


206 Pb  
Mass Calib.  
Actual: 206.00  
Required: 205.90-206.10  
Flag:  
Peak Width  
Actual: 0.40  
Required: 0.80  
Flag:



207 Pb  
Mass Calib.  
Actual: 206.95  
Required: 206.90-207.10  
Flag:  
Peak Width  
Actual: 0.45  
Required: 0.80  
Flag:

C:\ICPMH\1\7500\QCTUNE.D



208 Pb

Mass Calib.

Actual: 207.95

Required: 207.90-208.10

Flag:

Peak Width

Actual: 0.45

Required: 0.80

Flag:

QC Tune Result:Pass

# Batch Summary Report

Batch Folder: C:\ICPMH\1\DATA\11J12100.B\

Analysis File: 11J12100.batch.xml

Tune Step: #1 hehe.u

	Rjct	Acq. Date-Time	Data File	Sample Name	Type	Level	Dilution
1		10/12/2011 12:01:32 PM	001SMPLD	blank	Sample		1.0000
2		10/12/2011 12:03:54 PM	002CALB.D	blank	CalBlk	1	1.0000
3		10/12/2011 12:06:15 PM	003CALB.D	blank	CalBlk	1	1.0000
4		10/12/2011 12:08:37 PM	004CALS.D	H/1000	CalStd	2	1.0000
5		10/12/2011 12:10:57 PM	005CALS.D	H/100	CalStd	3	1.0000
6		10/12/2011 12:13:17 PM	006CALS.D	H/10	CalStd	4	1.0000
7		10/12/2011 12:15:38 PM	007CALS.D	HIGH	CalStd	5	1.0000
8		10/12/2011 12:20:48 PM	008SMPLD	ICV	6-ICV		1.0000
9		10/12/2011 12:23:11 PM	009SMPLD	ICB	6-CCB		1.0000
10		10/12/2011 12:25:32 PM	010SMPLD	CR1	Sample		1.0000
11		10/12/2011 12:27:53 PM	011SMPLD	CR2	Sample		1.0000
12		10/12/2011 12:30:12 PM	012SMPLD	ICSA	Sample		1.0000
13		10/12/2011 12:32:33 PM	013SMPLD	ICSAB	Sample		1.0000
14		10/12/2011 12:37:43 PM	014SMPLD	IP111010-3MB 10X	6-CCB		1.0000
15		10/12/2011 12:40:04 PM	015SMPLD	IM111010-3RVS 10X	Sample		1.0000
16		10/12/2011 12:42:25 PM	016SMPLD	IM111010-3LCS 10X	6-LCS		1.0000
17		10/12/2011 12:44:45 PM	017SMPLD	1110039-1 10X	Sample		1.0000
18		10/12/2011 12:47:08 PM	018SMPLD	1110039-2 10X	Sample		1.0000
19		10/12/2011 12:49:29 PM	019SMPLD	1110039-3 10X	Sample		1.0000
20		10/12/2011 12:54:37 PM	020SMPLD	CCV	6-CCV		1.0000
21		10/12/2011 12:56:59 PM	021SMPLD	CCB	6-CCB		1.0000
22		10/12/2011 12:59:19 PM	022SMPLD	1110039-3D 10X	Sample		1.0000
23		10/12/2011 1:01:40 PM	023SMPLD	1110039-3L 50X	Sample		1.0000
24		10/12/2011 1:04:01 PM	024SMPLD	1110039-3MS 10X	Sample		1.0000
25		10/12/2011 1:06:22 PM	025SMPLD	1110039-3MSD 10X	Sample		1.0000
26		10/12/2011 1:08:43 PM	026SMPLD	1110051-2 10X	Sample		1.0000
27		10/12/2011 1:11:05 PM	027SMPLD	1110051-3 10X	Sample		1.0000
28		10/12/2011 1:13:25 PM	028SMPLD	1110051-4 10X	Sample		1.0000

# Batch Summary Report

	Rjct	Acq. Date-Time	Data File	Sample Name	Type	Level	Dilution
29		10/12/2011 1:15:46 PM	029SMPLD	1110051-5 10X	Sample		1.0000
30		10/12/2011 1:18:07 PM	030SMPLD	1110051-6 10X	Sample		1.0000
31		10/12/2011 1:20:28 PM	031SMPLD	1110051-7 10X	Sample		1.0000
32		10/12/2011 1:22:49 PM	032SMPLD	CCV	6-CCV		1.0000
33		10/12/2011 1:25:10 PM	033SMPLD	CCB	6-CCB		1.0000
34		10/12/2011 1:27:31 PM	034SMPLD	1110051-7D 10X	Sample		1.0000
35		10/12/2011 1:29:52 PM	035SMPLD	1110051-7L 50X	Sample		1.0000
36		10/12/2011 1:32:13 PM	036SMPLD	1110051-7MS 10X	Sample		1.0000
37		10/12/2011 1:34:34 PM	037SMPLD	1110051-7MSD 10X	Sample		1.0000
38		10/12/2011 1:36:54 PM	038SMPLD	1110053-1 10X	Sample		1.0000
39		10/12/2011 1:39:14 PM	039SMPLD	1110053-2 10X	Sample		1.0000
40		10/12/2011 1:41:35 PM	040SMPLD	1110057-2 10X	Sample		1.0000
41		10/12/2011 1:57:07 PM	001SMPL_11J12n00.D	1110057-2 10000X	Sample		1.0000
42		10/12/2011 1:59:26 PM	002SMPL_11J12n00.D	CCV	6-CCV		1.0000
43		10/12/2011 2:01:48 PM	003SMPL_11J12n00.D	CCB	6-CCB		1.0000
44		10/12/2011 2:04:10 PM	004SMPL_11J12n00.D	IP111011-4MB 10X	6-CCB		1.0000
45		10/12/2011 2:06:31 PM	005SMPL_11J12n00.D	IM111011-4RVS 10X	Sample		1.0000
46		10/12/2011 2:08:50 PM	006SMPL_11J12n00.D	IM111011-4LCS 10X	6-LCS		1.0000
47		10/12/2011 2:11:10 PM	007SMPL_11J12n00.D	1110118-1 10X	Sample		1.0000
48		10/12/2011 2:13:31 PM	008SMPL_11J12n00.D	1110118-2 10X	Sample		1.0000
49		10/12/2011 2:15:52 PM	009SMPL_11J12n00.D	1110118-2D 10X	Sample		1.0000
50		10/12/2011 2:18:13 PM	010SMPL_11J12n00.D	1110118-2L 50X	Sample		1.0000
51		10/12/2011 2:20:34 PM	011SMPL_11J12n00.D	1110118-2MS 10X	Sample		1.0000
52		10/12/2011 2:22:57 PM	012SMPL_11J12n00.D	1110118-2MSD 10X	Sample		1.0000
53		10/12/2011 2:25:42 PM	013SMPL_11J12n00.D	1110118-3 10X	Sample		1.0000
54		10/12/2011 2:28:03 PM	014SMPL_11J12n00.D	CCV	6-CCV		1.0000
55		10/12/2011 2:30:24 PM	015SMPL_11J12n00.D	CCB	6-CCB		1.0000
56		10/12/2011 2:32:46 PM	016SMPL_11J12n00.D	1110118-4 10X	Sample		1.0000
57		10/12/2011 2:35:07 PM	017SMPL_11J12n00.D	1110118-5 10X	Sample		1.0000
58		10/12/2011 2:37:29 PM	018SMPL_11J12n00.D	1110118-6 10X	Sample		1.0000
59		10/12/2011 2:39:50 PM	019SMPL_11J12n00.D	1110118-7 10X	Sample		1.0000
60		10/12/2011 2:42:09 PM	020SMPL_11J12n00.D	1110118-8 10X	Sample		1.0000
61		10/12/2011 2:44:29 PM	021SMPL_11J12n00.D	1110118-9 10X	Sample		1.0000

No Sr  
Sr only

# Batch Summary Report

	Rjct	Acq. Date-Time	Data File	Sample Name	Type	Level	Dilution
62		10/12/2011 2:46:50 PM	022SMPL_11J12n00.D	1110118-10 10X	Sample		1.0000
63		10/12/2011 2:49:09 PM	023SMPL_11J12n00.D	1110118-11 10X	Sample		1.0000
64		10/12/2011 2:51:29 PM	024SMPL_11J12n00.D	1110118-12 10X	Sample		1.0000
65		10/12/2011 2:53:50 PM	025SMPL_11J12n00.D	CCV	6-CCV		1.0000
66		10/12/2011 2:56:13 PM	026SMPL_11J12n00.D	CCB	6-CCB		1.0000
67		10/12/2011 2:58:33 PM	027SMPL_11J12n00.D	EX111010-5MB 10X	6-CCB		1.0000
68		10/12/2011 3:00:53 PM	028SMPL_11J12n00.D	EXM111010-5RVS 10X	Sample		1.0000
69		10/12/2011 3:03:14 PM	029SMPL_11J12n00.D	EXM111010-5LCS 10X	6-LCS		1.0000
70		10/12/2011 3:05:34 PM	030SMPL_11J12n00.D	1109234-17 200X	Sample		1.0000
71		10/12/2011 3:07:55 PM	031SMPL_11J12n00.D	1109234-17D 200X	Sample		1.0000
72		10/12/2011 3:10:17 PM	032SMPL_11J12n00.D	1109234-17L 1000X	Sample		1.0000
73		10/12/2011 3:12:37 PM	033SMPL_11J12n00.D	1109234-17MS 200X	Sample		1.0000
74		10/12/2011 3:14:57 PM	034SMPL_11J12n00.D	1109234-17MSD 200X	Sample		1.0000
75		10/12/2011 3:17:18 PM	035SMPL_11J12n00.D	1109234-18 200X	Sample		1.0000
76		10/12/2011 3:19:37 PM	036SMPL_11J12n00.D	1109235-16 200X	Sample		1.0000
77		10/12/2011 3:21:57 PM	037SMPL_11J12n00.D	CCV	6-CCV		1.0000
78		10/12/2011 3:24:18 PM	038SMPL_11J12n00.D	CCB	6-CCB		1.0000
79		10/12/2011 3:26:38 PM	039SMPL_11J12n00.D	1109235-17 200X	Sample		1.0000
80		10/12/2011 3:28:58 PM	040SMPL_11J12n00.D	1109302-11 200X	Sample		1.0000
81		10/12/2011 3:31:17 PM	041SMPL_11J12n00.D	1109303-20 200X	Sample		1.0000
82		10/12/2011 3:33:37 PM	042SMPL_11J12n00.D	1109303-21 200X	Sample		1.0000
83		10/12/2011 3:35:56 PM	043SMPL_11J12n00.D	1109304-22 200X	Sample		1.0000
84		10/12/2011 3:38:16 PM	044SMPL_11J12n00.D	1109304-23 200X	Sample		1.0000
85		10/12/2011 3:40:36 PM	045SMPL_11J12n00.D	1109305-21 200X	Sample		1.0000
86		10/12/2011 3:42:56 PM	046SMPL_11J12n00.D	1109305-22 200X	Sample		1.0000
87		10/12/2011 3:45:21 PM	047SMPL_11J12n00.D	1109306-21 200X	Sample		1.0000
88		10/12/2011 3:47:42 PM	048SMPL_11J12n00.D	CCV	6-CCV		1.0000
89		10/12/2011 3:50:33 PM	049SMPL_11J12n00.D	CCB	6-CCB		1.0000
90		10/12/2011 3:52:56 PM	050SMPL_11J12n00.D	IP111007-4MB 10X	6-CCB		1.0000
91		10/12/2011 3:55:17 PM	051SMPL_11J12n00.D	IM111007-4RVS 10X	Sample		1.0000
92		10/12/2011 3:57:37 PM	052SMPL_11J12n00.D	IM111007-4LCS 10X	6-LCS		1.0000
93		10/12/2011 3:59:57 PM	053SMPL_11J12n00.D	1109363-1 100X	Sample		1.0000
94		10/12/2011 4:02:17 PM	054SMPL_11J12n00.D	1109363-1D 100X	Sample		1.0000



## Batch Summary Report

	Rjct	Acq. Date-Time	Data File	Sample Name	Type	Level	Dilution
95		10/12/2011 4:04:37 PM	055SMPL_11J12n00.D	1109363-1L 500X	Sample		1.0000
96		10/12/2011 4:06:58 PM	056SMPL_11J12n00.D	1109363-1MS 100X	Sample		1.0000
97		10/12/2011 4:09:18 PM	057SMPL_11J12n00.D	1109363-1MSD 100X	Sample		1.0000
98		10/12/2011 4:11:38 PM	058SMPL_11J12n00.D	1109363-2 100X	Sample		1.0000
99		10/12/2011 4:13:59 PM	059SMPL_11J12n00.D	1109363-3 10X	Sample		1.0000
100		10/12/2011 4:16:19 PM	060SMPL_11J12n00.D	CCV	6-CCV		1.0000
101		10/12/2011 4:18:41 PM	061SMPL_11J12n00.D	CCB	6-CCB		1.0000
102		10/12/2011 4:21:03 PM	062SMPL_11J12n00.D	1109363-4 10X	Sample		1.0000
103		10/12/2011 4:23:25 PM	063SMPL_11J12n00.D	1109363-5 10X	Sample		1.0000
104		10/12/2011 4:25:46 PM	064SMPL_11J12n00.D	1109363-6 10X	Sample		1.0000
105		10/12/2011 4:28:07 PM	065SMPL_11J12n00.D	1109363-7 10X	Sample		1.0000
106		10/12/2011 4:30:28 PM	066SMPL_11J12n00.D	1109363-8 10X	Sample		1.0000
107		10/12/2011 4:32:49 PM	067SMPL_11J12n00.D	1109363-9 10X	Sample		1.0000
108		10/12/2011 4:35:10 PM	068SMPL_11J12n00.D	1109363-10 10X	Sample		1.0000
109		10/12/2011 4:38:25 PM	069SMPL_11J12n00.D	1109363-11 10X	Sample		1.0000
110		10/12/2011 4:41:48 PM	070SMPL_11J12n00.D	1109363-12 100X	Sample		1.0000
111		10/12/2011 4:44:09 PM	071SMPL_11J12n00.D	CCV	6-CCV		1.0000
112		10/12/2011 4:46:31 PM	072SMPL_11J12n00.D	CCB	6-CCB		1.0000
113		10/12/2011 4:48:52 PM	073SMPL_11J12n00.D	IP111010-7MB 10X	6-CCB		1.0000
114		10/12/2011 4:51:14 PM	074SMPL_11J12n00.D	IM111010-7RVS 10X	Sample		1.0000
115		10/12/2011 4:53:36 PM	075SMPL_11J12n00.D	IM111010-7LCS 10X	6-LCS		1.0000
116		10/12/2011 4:55:58 PM	076SMPL_11J12n00.D	1110021-1 200X	Sample		1.0000
117		10/12/2011 4:58:19 PM	077SMPL_11J12n00.D	1110021-1D 200X	Sample		1.0000
118		10/12/2011 5:00:40 PM	078SMPL_11J12n00.D	1110021-1L 1000X	Sample		1.0000
119		10/12/2011 5:05:23 PM	079SMPL_11J12n00.D	1110021-1MS 200X	Sample		1.0000
120		10/12/2011 5:07:44 PM	080SMPL_11J12n00.D	1110021-1MSD 200X	Sample		1.0000
121		10/12/2011 5:10:05 PM	081SMPL_11J12n00.D	1110021-2 200X	Sample		1.0000
122		10/12/2011 5:12:26 PM	082SMPL_11J12n00.D	1110021-3 200X	Sample		1.0000
123		10/12/2011 5:19:54 PM	084SMPL_11J12n00.D	CCV	6-CCV		1.0000
124		10/12/2011 5:22:15 PM	085SMPL_11J12n00.D	CCB	6-CCB		1.0000
125		10/12/2011 5:24:40 PM	086SMPL_11J12n00.D	1110021-4 200X	Sample		1.0000
126		10/12/2011 5:27:01 PM	087SMPL_11J12n00.D	1110021-5 200X	Sample		1.0000
127		10/12/2011 5:29:23 PM	088SMPL_11J12n00.D	1110021-6 200X	Sample		1.0000

# Batch Summary Report

	Rct	Acq. Date-Time	Data File	Sample Name	Type	Level	Dilution
128		10/12/2011 5:31:45 PM	089SMPL_11J12n00.D	1110021-7 200X	Sample		1.0000
129		10/12/2011 5:34:07 PM	090SMPL_11J12n00.D	1110021-8 200X	Sample		1.0000
130		10/12/2011 5:36:29 PM	091SMPL_11J12n00.D	1110021-9 200X	Sample		1.0000
131		10/12/2011 5:38:51 PM	092SMPL_11J12n00.D	1110021-10 200X	Sample		1.0000
132		10/12/2011 5:41:13 PM	093SMPL_11J12n00.D	1110021-11 200X	Sample		1.0000
133		10/12/2011 5:43:35 PM	094SMPL_11J12n00.D	1110021-12 200X	Sample		1.0000
134		10/12/2011 5:45:57 PM	095SMPL_11J12n00.D	1110021-13 200X	Sample		1.0000
135		10/12/2011 5:53:27 PM	097SMPL_11J12n00.D	CCV	6-CCV		1.0000
136		10/12/2011 5:55:49 PM	098SMPL_11J12n00.D	CCB	6-CCB		1.0000
137		10/12/2011 5:58:11 PM	099SMPL_11J12n00.D	1110021-14 200X	Sample		1.0000
138		10/12/2011 6:00:33 PM	100SMPL_11J12n00.D	1110021-15 200X	Sample		1.0000
139		10/12/2011 6:02:55 PM	101SMPL_11J12n00.D	1110021-16 200X	Sample		1.0000
140		10/12/2011 6:05:15 PM	102SMPL_11J12n00.D	1110021-17 200X	Sample		1.0000
141		10/12/2011 6:07:35 PM	103SMPL_11J12n00.D	1109308-21 200X	Sample		1.0000
142		10/12/2011 6:09:57 PM	104SMPL_11J12n00.D	1109326-1 200X	Sample		1.0000
143		10/12/2011 6:12:19 PM	105SMPL_11J12n00.D	1109326-2 200X	Sample		1.0000
144		10/12/2011 6:14:41 PM	106SMPL_11J12n00.D	1109326-3 200X	Sample		1.0000
145		10/12/2011 6:34:49 PM	111SMPL_11J12n00.D	CCV	6-CCV		1.0000
146		10/12/2011 6:39:57 PM	112SMPL_11J12n00.D	CCB	6-CCB		1.0000
147		10/12/2011 6:42:19 PM	113SMPL_11J12n00.D	IP111011-6MB 10X	6-CCB		1.0000
148		10/12/2011 6:44:41 PM	114SMPL_11J12n00.D	IM111011-6RVS 10X	Sample		1.0000
149		10/12/2011 6:47:03 PM	115SMPL_11J12n00.D	IM111011-6LCS 10X	6-LCS		1.0000
150		10/12/2011 6:49:24 PM	116SMPL_11J12n00.D	1110049-1 10X	Sample		1.0000
151		10/12/2011 6:51:47 PM	117SMPL_11J12n00.D	1110049-1D 10X	Sample		1.0000
152		10/12/2011 6:54:08 PM	118SMPL_11J12n00.D	1110049-1L 50X	Sample		1.0000
153		10/12/2011 6:56:30 PM	119SMPL_11J12n00.D	1110049-1MS 10X	Sample		1.0000
154		10/12/2011 6:58:51 PM	120SMPL_11J12n00.D	1110049-1MSD 10X	Sample		1.0000
155		10/12/2011 7:01:14 PM	121SMPL_11J12n00.D	1110049-3 10X	Sample		1.0000
156		10/12/2011 7:03:34 PM	122SMPL_11J12n00.D	ZZZZZZ	Sample		1.0000
157		10/12/2011 7:08:41 PM	123SMPL_11J12n00.D	CCV	6-CCV		1.0000
158		10/12/2011 7:11:05 PM	124SMPL_11J12n00.D	CCB	6-CCB		1.0000
159		10/12/2011 7:13:27 PM	125SMPL_11J12n00.D	1110049-5 10X	Sample		1.0000
160		10/12/2011 7:15:48 PM	126SMPL_11J12n00.D	1110049-6 10X	Sample		1.0000

# Batch Summary Report

	Rjct	Acq. Date-Time	Data File	Sample Name	Type	Level	Dilution
161		10/12/2011 7:18:09 PM	127SMPL_11J12n00.D	1110049-9 10X	Sample		1.0000
162		10/12/2011 7:20:30 PM	128SMPL_11J12n00.D	1110049-4 10X	Sample		1.0000
163		10/12/2011 7:25:38 PM	129SMPL_11J12n00.D	ZZZZZZ	Sample		1.0000
164		10/12/2011 7:30:45 PM	130SMPL_11J12n00.D	CCV	6-CCV		1.0000
165		10/12/2011 7:33:06 PM	131SMPL_11J12n00.D	CCB	6-CCB		1.0000

# Batch Summary Report

Analyte Table

	Sample Name	55 Mn [1]		56 Fe [1]		66 Zn [1]		75 As [1]		78 Se [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS
1	blank		46.67		880.07		106.67		2.67		0.13
2	blank	0.000	65.00	0.502	910.06	0.010	100.00	0.000	6.00	0.007	0.80
3	blank	0.000	66.67	0.611	1123.41	0.000	96.67	0.000	6.00	0.000	0.53
4	H/1000	0.266	478.35	9.518	18574.47	11.385	5397.79	0.108	41.33	0.096	4.53
5	H/100	2.009	3378.76	54.386	113715.50	41.208	20660.62	1.001	353.68	1.125	51.07
6	H/10	19.656	33499.78	499.461	1074414.67	205.192	106102.84	9.729	3494.39	11.800	548.59
7	HIGH	200.034	336032.60	5000.056	9929979.44	1999.259	1019741.83	100.027	35429.32	99.819	4568.51
8	ICV	39.698	68253.99	1034.145	2228914.65	402.390	209957.95	19.279	6989.19	19.632	919.36
9	ICB	-0.020	36.67	0.895	1626.83	0.218	190.01	-0.011	2.67	0.004	0.67
10	CRI1	0.845	1393.43	229.179	454825.34	79.155	37664.68	0.098	38.67	0.127	6.00
11	CRI2	0.454	776.70	16.494	32509.78	6.657	3233.80	0.205	73.67	0.237	10.53
12	ICSA	1.919	3313.76		49498534.26	1.610	936.74	0.011	11.00	0.036	2.27
13	ICSAB	21.532	37254.51		52084000.89	242.601	127324.30	10.344	3773.79	9.965	469.34
14	IP111010-3MB ...	-0.015	45.00	2.751	5057.68	0.472	303.35	-0.011	2.67	0.013	1.07
15	IM111010-3RVS...	0.241	425.02	7.684	14523.67	2.627	1280.11	0.102	38.00	0.112	5.07
16	IM111010-3LCS...	19.229	31200.13	483.537	990511.16	198.968	97930.71	9.456	3235.67	9.984	441.08
17	1110039-1 10X	0.340	611.69	17.342	35008.49	0.499	346.69	0.170	63.33	0.604	26.67
18	1110039-2 10X	0.121	263.34	6.452	12975.56	1.647	893.40	0.408	142.33	0.150	7.07
19	1110039-3 10X	0.379	641.69	20.030	38490.38	0.719	430.03	0.038	18.33	0.012	1.07
20	CCV	20.379	32666.44	506.390	1023932.38	202.841	98588.52	9.789	3308.35	10.294	449.08
21	CCB	0.012	80.00	1.756	3080.42	0.074	123.34	-0.014	1.67	-0.006	0.27
22	1110039-3D 10X	0.316	550.02	17.363	33552.21	0.426	296.68	0.064	27.00	0.032	1.87
23	1110039-3L 50X	0.061	155.00	4.833	8923.37	0.007	100.00	0.005	7.67	0.024	1.47
24	1110039-3MS 10X	19.264	30425.47	505.914	1008382.62	200.243	95949.07	9.559	3183.66	10.144	436.14
25	1110039-3MSD ...	19.404	32409.39	500.329	1054127.36	193.324	97956.05	9.559	3367.03	10.134	461.08
26	1110051-2 10X	23.923	37578.54	114.319	227847.87	12.114	5864.66	0.068	29.00	0.058	3.07
27	1110051-3 10X	4.548	7283.45	222.501	447755.25	0.346	273.35	3.367	1132.04	0.005	0.80
28	1110051-4 10X	123.235	197084.99	12.116	24669.72	0.316	260.01	0.056	25.67	-0.001	0.53
29	1110051-5 10X	7.013	11127.31	333.313	665826.26	0.220	210.01	1.228	414.68	0.009	0.93
30	1110051-6 10X	126.664	203824.67	8.552	17533.41	0.276	243.35	0.073	31.67	0.013	1.20
31	1110051-7 10X	23.914	37979.50	12.644	25557.67	10.233	5037.70	0.003	7.67	0.038	2.27



# Batch Summary Report

Analyte Table

	Sample Name	55 Mn [1]		56 Fe [1]		66 Zn [1]		75 As [1]		78 Se [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS
32	CCV	20.123	31577.71	503.253	996057.33	205.399	97723.05	9.946	3289.01	10.050	428.94
33	CCB	-0.002	60.00	1.049	1826.85	0.027	103.34	-0.012	2.33	0.012	0.93
34	1110051-7D 10X	24.117	37966.09	12.418	24853.23	11.033	5367.79	0.010	10.00	0.043	2.40
35	1110051-7L 50X	4.676	7298.44	3.048	6001.36	2.355	1210.10	-0.007	4.00	0.008	0.93
36	1110051-7MS 10X	42.909	67285.20	512.526	1014899.65	209.894	99939.67	9.589	3173.99	9.984	426.28
37	1110051-7MSD ...	42.326	67348.71	493.817	992837.69	205.422	99268.50	9.577	3216.33	10.296	446.41
38	1110053-1 10X	0.857	1416.76	13.088	26145.11	4.265	2136.91	-0.002	5.67	0.080	4.00
39	1110053-2 10X	0.804	1333.42	11.343	22676.58	2.968	1520.15	0.013	10.67	0.109	5.20
40	1110057-2 10X	108.773	169308.31	2.478	4910.97	49.196	23347.54	0.425	146.00	0.112	5.33
41	1110057-2 100...	0.115	235.00	0.678	1263.45	0.214	193.34	-0.014	1.67	0.006	0.80
42	CCV	19.617	30976.43	504.515	1004849.23	201.839	96642.80	9.520	3167.32	9.932	426.54
43	CCB	-0.010	50.00	0.726	1270.11	-0.043	73.33	-0.016	1.00	0.012	0.93
44	IP111011-4MB ...	-0.002	60.00	1.099	1936.87	0.238	193.34	-0.014	1.67	0.083	3.60
45	IM111011-4RVS...	0.197	353.34	5.971	10990.87	2.284	1096.76	0.083	31.33	0.090	4.00
46	IM111011-4LCS...	18.881	29331.72	474.057	929707.54	194.543	91701.48	9.319	3052.30	9.798	414.28
47	1110118-1 10X	0.265	488.35	1.940	3880.65	1.804	966.74	0.402	139.67	2.147	92.40
48	1110118-2 10X	0.179	358.35	2.608	5274.46	0.349	273.35	0.367	129.33	2.293	99.87
49	1110118-2D 10X	0.195	381.68	1.325	2663.69	0.426	310.02	0.366	128.33	2.434	105.20
50	1110118-2L 50X	0.010	86.67	1.044	2060.23	0.127	163.34	0.064	27.33	0.572	24.67
51	1110118-2MS 10X	20.158	32164.04	512.082	1030728.55	204.276	98821.07	10.390	3497.06	12.228	532.54
52	1110118-2MSD ...	20.163	31393.85	512.286	1006154.80	203.962	96271.22	10.734	3523.39	12.492	529.08
53	1110118-3 10X	0.345	615.02	6.427	12882.25	0.482	336.69	0.405	141.33	2.213	95.60
54	CCV	20.880	32809.93	515.635	1022087.70	207.766	99014.30	10.420	3447.71	10.383	444.54
55	CCB	-0.014	48.33	0.607	1143.43	0.067	130.01	-0.016	1.33	0.004	0.67
56	1110118-4 10X	0.156	325.01	1.353	2757.04	0.472	336.69	0.382	135.67	2.211	97.07
57	1110118-5 10X	0.131	283.34	1.070	2186.91	0.313	260.01	0.323	116.33	2.288	100.53
58	1110118-6 10X	0.145	308.34	1.180	2416.96	0.107	160.01	0.395	140.67	2.304	101.60
59	1110118-7 10X	0.201	398.35	0.971	1993.54	0.503	353.35	0.404	144.00	2.140	94.53
60	1110118-8 10X	0.139	303.34	1.525	3170.44	0.505	360.03	0.367	133.67	2.242	100.67
61	1110118-9 10X	0.161	340.01	1.164	2426.97	0.418	316.68	0.379	137.33	2.248	100.80
62	1110118-10 10X	0.159	325.01	1.017	2056.88	0.360	280.01	0.308	110.00	2.274	99.07

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## Batch Summary Report

Analyte Table

	Sample Name	55 Mn [1]		56 Fe [1]		66 Zn [1]		75 As [1]		78 Se [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS
63	1110118-11 10X	0.117	268.34	1.596	3340.51	0.287	253.35	0.402	146.00	2.323	104.87
64	1110118-12 10X	0.180	365.01	0.920	1886.86	0.619	410.02	0.376	134.33	2.537	111.87
65	CCV	20.429	33728.63	513.230	1069411.96	206.379	103384.71	10.073	3506.39	10.829	486.28
66	CCB	-0.015	46.67	0.806	1186.77	-0.018	93.34	-0.016	1.33	0.012	1.07
67	EX111010-5MB...	0.043	145.00	1.914	3943.99	0.770	486.70	-0.012	2.67	0.023	1.60
68	EXM111010-5RV...	0.199	358.34	6.792	12615.46	2.475	1193.44	0.082	31.33	0.111	4.93
69	EXM111010-5LC...	19.282	31221.90	500.108	1021684.57	202.695	99507.58	9.705	3313.35	10.037	442.14
70	1109234-17 200X	0.357	595.02	15.680	29594.32	3.546	1693.52	1.719	543.01	0.685	28.13
71	1109234-17D 2...	0.326	536.69	16.251	29991.78	2.722	1296.79	1.946	600.68	0.825	33.07
72	1109234-17L 1...	0.055	140.00	3.614	6394.84	0.722	396.69	0.293	91.67	0.187	7.60
73	1109234-17MS ...	1.277	2043.52	38.061	75085.14	12.613	6041.39	2.103	689.35	1.258	53.47
74	1109234-17MSD...	1.414	2098.52	42.795	78220.58	13.325	5911.33	2.415	737.35	1.211	48.00
75	1109234-18 200X	0.381	615.02	45.273	83102.30	0.986	530.03	2.140	656.68	0.759	30.53
76	1109235-16 200X	0.317	511.69	9.477	16986.24	5.253	2340.28	1.980	593.34	0.712	27.87
77	CCV	20.360	30710.94	512.988	976499.20	207.353	94885.83	10.127	3222.66	10.385	426.94
78	CCB	-0.014	43.33	0.620	1056.75	0.042	106.67	-0.013	2.00	0.005	0.67
79	1109235-17 200X	0.318	581.69	16.934	34320.68	7.970	3940.67	2.423	823.03	0.800	35.47
80	1109302-11 200X	0.697	1073.39	145.289	266600.50	0.312	233.35	2.913	891.69	1.156	46.00
81	1109303-20 200X	0.327	541.69	75.129	139038.27	2.900	1380.11	1.987	615.35	0.913	36.67
82	1109303-21 200X	0.398	635.03	25.764	46908.42	4.078	1863.53	2.051	624.68	0.891	35.20
83	1109304-22 200X	0.303	501.69	28.715	52655.46	3.310	1543.48	1.938	593.68	0.783	31.20
84	1109304-23 200X	0.331	538.35	22.292	40594.44	2.106	1010.08	1.991	606.35	0.845	33.47
85	1109305-21 200X	0.310	511.69	27.216	49783.36	0.854	466.70	1.880	575.01	0.609	24.40
86	1109305-22 200X	0.410	653.36	110.213	200531.54	0.377	260.01	3.023	918.03	1.064	42.00
87	1109306-21 200X	0.317	535.02	31.579	59388.66	0.769	443.36	2.055	647.01	0.870	35.60
88	CCV	19.998	30493.88	506.784	974756.05	203.802	94243.04	10.174	3269.01	10.236	424.28
89	CCB	-0.005	56.67	0.580	1000.08	0.021	100.00	-0.009	3.00	0.001	0.53
90	IP111007-4MB ...	0.033	115.00	4.904	9086.32	0.390	260.02	-0.014	1.67	0.019	1.20
91	IM111007-4RVS...	0.294	475.02	10.174	18124.19	2.176	1020.08	0.100	35.33	0.157	6.53
92	IM111007-4LCS...	19.670	29363.47	498.689	939032.09	202.674	91760.94	9.661	3038.63	10.295	418.41
93	1109363-1 100X	35.213	52668.33	1705.420	3165474.12	6.542	3073.76	2.085	662.69	1.788	73.33

# Batch Summary Report

Analyte Table

	Sample Name	55 Mn [1]		56 Fe [1]		66 Zn [1]		75 As [1]		78 Se [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS
94	1109363-1D 100X	35.488	53029.41	1820.637	3370260.89	6.358	2983.73	2.180	686.35	1.557	63.87
95	1109363-1L 500X	6.996	10064.96	347.393	629459.21	1.304	663.38	0.394	124.67	0.397	16.00
96	1109363-1MS 1...	39.674	59170.52	1976.374	3644339.43	27.648	12612.14	3.287	1039.04	2.861	116.53
97	1109363-1MSD ...	38.142	57763.81	1835.773	3444048.59	26.165	12118.38	3.078	988.37	2.772	114.80
98	1109363-2 100X	18.705	23457.25	909.681	1601538.67	3.670	1650.17	0.634	193.00	0.463	18.13
99	1109363-3 10X	162.851	244717.98	9853.923	16189156.01	27.540	12668.78	3.923	1248.72	0.924	38.40
100	CCV	20.525	30637.42	510.498	961672.36	210.629	95335.48	10.203	3212.66	10.360	421.21
101	CCB	0.011	75.00	1.435	2433.82	0.199	170.01	-0.015	1.33	-0.003	0.40
102	1109363-4 10X	173.859	264367.38	12800.273	20230156.36	32.464	15090.87	4.923	1585.09	0.676	28.53
103	1109363-5 10X	153.227	235283.25	10160.213	16966640.16	27.835	13052.62	4.096	1332.06	0.729	30.93
104	1109363-6 10X	152.750	230598.55	10356.705	16950934.75	30.592	14126.73	4.315	1379.73	1.417	58.80
105	1109363-7 10X	161.699	242436.61	11781.561	18687470.14	31.391	14393.65	4.765	1512.74	1.019	42.00
106	1109363-8 10X	171.176	258437.98	10569.205	17234609.33	26.293	12148.38	5.498	1756.10	3.629	149.87
107	1109363-9 10X	128.298	202067.61	9026.564	15756133.10	24.251	11698.00	3.531	1179.05	0.427	18.93
108	1109363-10 10X	148.162	225853.97	10021.448	16654146.00	29.395	13706.39	4.024	1299.72	0.725	30.67
109	1109363-11 10X	148.284	228081.03	9601.805	16211754.76	27.215	12802.23	3.711	1209.72	0.450	19.47
110	1109363-12 100X	26.084	39165.65	2170.370	4015077.02	7.329	3437.19	1.709	546.34	1.277	52.67
111	CCV	20.170	30654.13	508.582	975156.44	207.098	95466.35	9.812	3143.65	10.342	427.21
112	CCB	0.038	113.33	4.884	8345.83	0.127	143.34	-0.012	2.33	0.023	1.33
113	IP111010-7MB ...	0.102	200.01	7.417	12775.58	0.445	273.35	-0.014	1.67	0.015	1.07
114	IM111010-7RVS...	0.313	493.35	13.411	23470.91	2.811	1266.79	0.087	31.00	0.072	3.20
115	IM111010-7LCS...	19.574	28622.13	510.855	942380.53	201.370	89304.67	9.738	3001.29	10.327	410.94
116	1110021-1 200X	0.982	1520.11	319.264	598317.65	14.197	6471.58	12.626	3944.49	4.139	167.73
117	1110021-1D 200X	1.160	1831.81	361.353	694964.39	15.347	7205.31	14.601	4684.70	5.070	210.67
118	1110021-1L 10...	0.220	373.34	66.099	117821.24	2.625	1210.10	2.419	720.35	0.777	30.00
119	1110021-1MS 2...	2.107	3172.05	388.163	724420.10	26.683	12028.24	14.917	4640.68	5.401	217.47
120	1110021-1MSD ...	2.132	3267.07	372.778	708054.26	25.166	11567.96	14.426	4570.99	5.365	220.13
121	1110021-2 200X	0.896	1396.76	347.988	653925.90	13.759	6294.84	12.539	3926.82	4.438	179.87
122	1110021-3 200X	1.033	1588.44	326.566	609087.49	15.404	6985.16	13.069	4060.52	4.741	190.53
123	CCV	19.911	29453.54	511.534	954832.85	207.649	93173.51	10.140	3161.99	10.268	413.21
124	CCB	-0.011	46.67	1.265	2146.91	0.030	103.34	-0.011	2.67	0.001	0.53



# Batch Summary Report

Analyte Table

	Sample Name	55 Mn [1]		56 Fe [1]		66 Zn [1]		75 As [1]		78 Se [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS
125	1110021-4 200X	1.403	2125.19	491.761	911421.11	27.378	12285.18	14.125	4372.27	4.957	198.27
126	1110021-5 200X	1.410	2151.86	479.905	897666.39	27.186	12301.84	12.975	4051.85	4.274	172.67
127	1110021-6 200X	1.625	2398.57	489.612	888835.04	25.293	11114.21	13.928	4222.90	4.630	181.47
128	1110021-7 200X	1.665	2488.57	475.126	873867.54	25.701	11441.19	13.879	4261.57	4.647	184.80
129	1110021-8 200X	1.217	1840.15	363.545	670851.94	20.195	9022.86	13.506	4152.88	4.829	192.13
130	1110021-9 200X	1.211	1830.15	451.824	832215.93	20.628	9216.29	13.760	4227.56	5.049	200.67
131	1110021-10 200X	1.080	1603.45	346.117	624614.68	17.729	7758.87	13.125	3947.49	4.405	171.33
132	1110021-11 200X	1.251	1830.15	448.289	800288.50	24.599	10623.95	14.831	4416.95	5.236	201.47
133	1110021-12 200X	1.125	1708.47	366.962	678714.26	20.153	9032.90	13.800	4254.24	4.856	193.60
134	1110021-13 200X	1.025	1555.11	318.806	587155.88	14.716	6588.32	12.745	3909.15	4.344	172.40
135	CCV	19.941	28819.12	500.411	912822.07	201.978	88527.74	9.691	2952.62	10.161	400.14
136	CCB	-0.007	50.00	1.089	1753.51	0.032	96.67	-0.002	4.67	0.006	0.67
137	1110021-14 200X	1.152	1695.13	342.647	615089.28	15.462	6741.77	13.766	4116.54	4.506	174.53
138	1110021-15 200X	1.243	1830.15	305.126	550807.22	17.324	7575.48	13.490	4050.19	4.717	183.07
139	1110021-16 200X	1.070	1625.12	287.215	530843.04	15.249	6845.05	12.575	3869.81	4.357	173.47
140	1110021-17 200X	1.000	1550.11	309.234	580697.54	18.057	8219.17	13.892	4343.60	4.914	198.53
141	1109308-21 200X	3.356	4984.20	615.091	1137828.78	38.753	17336.66	17.344	5363.90	5.505	220.27
142	1109326-1 200X	1.789	2590.26	53.947	96943.23	3.374	1540.14	0.066	25.33	0.014	1.07
143	1109326-2 200X	0.341	535.02	14.404	25420.56	1.030	526.71	0.019	11.33	0.029	1.60
144	1109326-3 200X	1.245	1828.48	13.413	24178.49	3.009	1390.13	0.056	22.67	0.080	3.60
145	CCV	19.837	29779.22	501.219	949378.45	206.819	94165.38	9.943	3146.65	10.323	422.01
146	CCB	-0.012	45.00	0.737	1226.78	0.191	163.34	-0.014	1.67	0.028	1.47
147	IP111011-6MB ...	0.019	86.67	1.104	1883.54	1.015	503.36	-0.019	0.33	0.001	0.53
148	IM111011-6RVS...	0.170	291.68	6.138	10547.16	2.405	1076.75	0.105	35.67	0.102	4.27
149	IM111011-6LCS...	19.649	28865.96	492.002	912098.55	200.821	89472.33	9.828	3044.29	10.033	400.94
150	1110049-1 10X	-0.002	58.33	1.074	1806.85	0.422	256.68	-0.019	0.33	0.020	1.20
151	1110049-1D 10X	0.022	90.00	1.908	3210.46	45.486	18334.38	-0.011	2.33	0.020	1.20
152	1110049-1L 50X	-0.006	51.67	0.929	1523.48	1.633	723.39	-0.012	2.00	0.028	1.47
153	1110049-1MS 10X	19.298	28637.19	491.780	920785.95	196.374	88369.23	9.727	3042.30	10.425	420.68
154	1110049-1MSD ...	19.422	29283.40	483.294	919417.59	197.993	90507.99	9.368	2977.28	9.973	409.34
155	1110049-3 10X	514.367	770966.47	5.492	10484.32	4.425	2113.57	0.871	281.67	15.280	624.81



# Batch Summary Report

Analyte Table

	Sample Name	55 Mn [1]		56 Fe [1]		66 Zn [1]		75 As [1]		78 Se [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS
156	ZZZZZZ	0.222	375.01	1.014	1810.18	0.421	273.35	-0.015	1.33	0.018	1.20
157	CCV	20.265	31330.48	509.520	993710.09	209.805	98355.99	10.112	3293.34	10.239	430.54
158	CCB	0.024	96.67	0.863	1496.88	0.175	163.34	-0.010	2.67	0.001	0.53
159	1110049-5 10X	2860.004	4522740.66	59.053	118875.49	70.355	33896.16	0.139	53.00	4.561	197.20
160	1110049-6 10X	2859.507	4716025.35	23.098	48519.43	67.145	33735.90	0.124	50.00	4.154	187.20
161	1110049-9 10X	83.629	133431.41	19.722	40046.37	1.253	713.39	0.603	209.33	25.452	1106.44
162	1110049-4 10X	0.170	315.01	0.676	1253.45	-0.015	90.00	-0.014	1.67	0.020	1.33
163	ZZZZZZ	0.189	325.01	0.714	1256.79	0.235	190.01	-0.017	0.67	0.001	0.53
164	CCV	20.811	31630.84	522.132	1001300.92	210.315	96981.58	10.196	3267.67	10.837	448.54
165	CCB	0.265	431.68	0.736	1300.13	0.183	170.01	-0.016	1.00	0.025	1.47

# Batch Summary Report

Analyte Table

	Sample Name	88 Sr [1]		111 Cd [1]		206 (Pb) [1]		207 (Pb) [1]		208 Pb [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS
1	blank		36.67		1.33		116.67		83.34		360.02
2	blank	-0.002	40.00	0.002	2.00	0.013	96.67	-0.011	50.00	0.002	316.68
3	blank	0.000	46.67	0.000	0.67	0.000	63.34	0.000	76.67	0.000	300.02
4	H/1000	0.140	430.03	0.064	50.64	0.072	286.69	0.049	206.68	0.054	956.73
5	H/100	0.973	2903.73	0.295	244.40	0.510	1650.18	0.530	1453.49	0.537	6754.30
6	H/10	9.779	29692.03	2.928	2534.77	5.227	17160.89	5.094	13923.89	5.218	66074.57
7	HIGH	100.022	299603.82	30.007	25997.79	49.977	166938.58	49.990	138879.34	49.978	643891.65
8	ICV	19.431	59551.81	5.884	5159.38	9.778	32329.98	10.166	27977.64	9.971	127204.58
9	ICB	-0.006	30.00	0.003	2.66	0.004	70.00	-0.014	43.33	-0.004	246.68
10	CRI1	0.142	446.70	0.041	33.30	0.051	226.68	0.084	300.02	0.066	1116.74
11	CRI2	0.219	653.38	0.077	60.61	0.096	356.69	0.120	383.36	0.117	1680.15
12	ICSA	1.362	4150.75	0.001	1.55	0.019	136.67	0.009	116.67	0.015	543.37
13	ICSAB	11.258	34718.47	2.912	2613.61	5.065	16843.67	5.099	14117.47	5.100	65469.43
14	JP111010-3MB ...	0.005	60.00	0.001	1.32	0.001	66.67	-0.017	36.67	-0.004	253.35
15	IM111010-3RVS...	0.127	383.36	0.040	30.64	0.072	266.68	0.028	143.34	0.063	990.07
16	IM111010-3LCS...	9.444	27331.05	3.073	2530.37	5.042	15532.20	4.944	12709.44	5.050	60123.84
17	1110039-1 10X	102.024	288469.73	0.002	2.26	0.004	83.34	-0.019	36.67	0.002	360.02
18	1110039-2 10X	82.021	230813.04	0.011	9.78	0.006	86.67	0.002	90.01	0.011	460.03
19	1110039-3 10X	4.478	12095.16	0.004	3.97	0.017	120.01	-0.005	73.34	0.007	420.03
20	CCV	9.530	27217.56	3.020	2503.58	5.081	15595.60	5.257	13430.04	5.123	60677.58
21	CCB	-0.005	33.33	0.005	3.99	-0.015	20.00	-0.007	56.67	-0.006	220.01
22	1110039-3D 10X	4.527	12288.71	0.000	0.64	-0.007	46.67	-0.014	46.67	-0.007	236.68
23	1110039-3L 50X	0.886	2333.62	0.001	1.33	0.010	93.34	-0.019	33.33	-0.007	226.68
24	1110039-3MS 10X	14.223	40014.47	2.964	2356.36	5.014	15115.12	5.086	12762.85	5.102	59342.88
25	1110039-3MSD ...	13.633	40623.38	2.939	2487.54	5.003	16213.05	4.945	13350.02	4.990	62438.25
26	1110051-2 10X	12.775	35747.52	0.886	732.44	8.411	25716.99	8.412	21409.83	8.352	98554.75
27	1110051-3 10X	43.139	121913.83	0.003	3.04	0.026	146.68	-0.002	80.00	0.014	493.36
28	1110051-4 10X	13.633	38911.92	0.006	5.89	-0.004	56.67	-0.024	23.33	-0.005	280.02
29	1110051-5 10X	21.090	59274.53	-0.001	-0.04	0.016	116.67	-0.016	43.33	0.001	336.68
30	1110051-6 10X	14.169	40686.35	0.016	13.86	-0.002	63.34	-0.011	56.67	-0.008	243.35
31	1110051-7 10X	12.810	36285.56	0.822	675.11	8.838	27135.98	8.706	22257.60	8.615	102092.95

# Batch Summary Report

Analyte Table

	Sample Name	88 Sr [1]		111 Cd [1]		206 (Pb) [1]		207 (Pb) [1]		208 Pb [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS
32	CCV	9.894	27654.87	3.062	2438.28	5.209	15702.27	5.262	13206.69	5.146	59892.62
33	CCB	0.004	53.33	0.000	0.67	-0.005	46.67	-0.018	33.33	-0.011	173.34
34	1110051-7D 10X	13.240	37147.55	0.902	723.76	8.905	26812.04	8.936	22401.47	8.808	102351.17
35	1110051-7L 50X	2.610	7238.71	0.179	139.28	1.782	5257.87	1.741	4300.88	1.731	19762.82
36	1110051-7MS 10X	22.368	62526.58	3.830	3140.89	13.281	41349.27	13.206	34221.26	13.198	158521.32
37	1110051-7MSD ...	22.012	62429.14	3.862	3104.94	13.794	41523.33	13.395	33542.79	13.479	156519.00
38	1110053-1 10X	38.452	107630.36	0.004	3.84	0.023	136.67	0.010	106.67	0.026	623.37
39	1110053-2 10X	40.008	111943.43	0.001	1.19	0.043	200.01	0.051	213.35	0.054	963.40
40	1110057-2 10X	21096.105	58520945.79	0.021	18.34	0.196	623.38	0.208	573.38	0.204	2550.22
41	1110057-2 100...	23.002	60016.92	0.001	1.33	-0.003	56.67	-0.016	40.00	-0.010	196.67
42	CCV	10.827	30456.64	2.996	2426.96	5.050	15301.89	5.018	12659.29	5.043	58971.49
43	CCB	0.666	1673.51	0.000	0.67	-0.015	20.00	-0.008	56.67	-0.010	186.68
44	IP111011-4MB ...	0.410	1056.75	0.003	2.67	0.134	441.72	-0.018	33.33	0.029	611.73
45	IM111011-4RVS...	0.476	1273.44	0.021	15.98	0.037	166.68	0.048	190.01	0.042	763.38
46	IM111011-4LCS...	9.887	27371.05	2.923	2321.73	4.811	14617.88	4.985	12632.66	4.819	56537.38
47	1110118-1 10X	428.335	1199521.67	0.013	11.30	0.001	73.34	-0.006	70.00	-0.003	293.35
48	1110118-2 10X	422.952	1197157.04	-0.001	-0.07	0.002	73.34	-0.007	66.67	0.009	433.36
49	1110118-2D 10X	428.237	1205775.22	0.000	1.04	-0.007	46.67	-0.005	73.34	-0.005	280.01
50	1110118-2L 50X	86.042	237481.56	0.003	3.41	-0.008	43.34	-0.019	36.67	-0.008	236.68
51	1110118-2MS 10X	441.086	1251816.28	3.141	2623.02	5.350	16607.01	5.099	13196.65	5.162	61873.36
52	1110118-2MSD ...	442.284	1224713.68	2.917	2394.32	5.140	15685.78	4.991	12709.57	5.043	59466.18
53	1110118-3 10X	439.469	1233572.09	0.007	6.84	0.005	83.34	-0.013	50.00	-0.001	320.02
54	CCV	10.361	29010.63	3.036	2506.21	5.026	15849.41	4.927	12942.95	4.985	60681.46
55	CCB	0.121	363.36	0.004	3.99	-0.011	30.00	-0.027	13.33	-0.017	116.67
56	1110118-4 10X	410.267	1170848.91	-0.009	-7.02	-0.004	56.67	-0.025	20.00	-0.008	240.01
57	1110118-5 10X	415.673	1189695.63	0.007	6.61	-0.009	43.33	-0.007	66.67	-0.009	226.68
58	1110118-6 10X	423.649	1215440.27	-0.001	-0.08	-0.012	33.33	-0.014	50.00	-0.009	226.67
59	1110118-7 10X	427.238	1227720.16	0.003	3.29	-0.001	66.67	-0.020	33.33	-0.006	256.69
60	1110118-8 10X	433.684	1265021.15	0.004	4.64	-0.010	40.00	-0.013	50.00	-0.013	183.34
61	1110118-9 10X	424.345	1238052.59	0.000	0.58	-0.009	43.33	-0.018	40.00	-0.011	203.34
62	1110118-10 10X	424.853	1203251.39	0.008	7.66	-0.016	20.00	-0.010	60.00	-0.014	173.34

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# Batch Summary Report

Analyte Table

	Sample Name	88 Sr [1]		111 Cd [1]		206 (Pb) [1]		207 (Pb) [1]		208 Pb [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS
63	1110118-11 10X	429.421	1258666.02	-0.002	-1.24	-0.019	10.00	-0.011	60.00	-0.014	176.68
64	1110118-12 10X	435.653	1250902.40	-0.009	-7.08	-0.006	53.34	-0.014	50.00	-0.011	206.67
65	CCV	10.442	30720.52	2.987	2550.81	5.048	16042.77	5.033	13313.28	5.081	62314.24
66	CCB	0.146	453.36	0.006	5.31	-0.009	40.00	-0.020	30.00	-0.011	186.67
67	EX111010-5MB...	0.176	560.04	0.007	6.65	0.018	126.67	0.025	150.01	0.026	640.04
68	EXM111010-5RV...	0.306	843.40	0.042	31.96	0.046	196.68	0.065	230.01	0.047	826.72
69	EXM111010-5LC...	9.846	28402.99	3.077	2490.27	5.150	16069.46	5.196	13483.55	5.127	61696.27
70	1109234-17 200X	5.677	15041.15	0.003	2.63	7.728	22638.41	8.567	20872.21	8.735	98698.61
71	1109234-17D 2...	5.999	15551.62	0.002	1.99	8.393	24094.03	9.457	22618.69	9.477	105002.92
72	1109234-17L 1...	1.214	3050.45	0.002	1.99	1.624	4417.57	1.763	4004.10	1.773	18629.00
73	1109234-17MS ...	6.006	16559.35	0.140	112.54	7.931	24237.96	9.032	22942.39	8.892	104850.22
74	1109234-17MSD...	6.599	16939.65	0.146	109.87	8.551	24832.05	9.397	22695.14	9.448	105780.26
75	1109234-18 200X	6.691	17250.09	0.003	2.66	1.326	3854.05	1.431	3480.62	1.467	16474.63
76	1109235-16 200X	5.996	15084.44	0.004	3.32	16.166	46809.39	17.818	42927.32	17.965	200666.15
77	CCV	10.097	27150.83	3.148	2422.36	5.040	14861.51	5.307	13033.00	5.169	58811.68
78	CCB	0.011	70.00	0.003	2.67	-0.014	23.33	-0.021	26.67	-0.007	210.01
79	1109235-17 200X	6.054	17210.02	0.002	1.98	35.843	112545.60	40.096	104843.53	40.333	488613.02
80	1109302-11 200X	14.778	38083.46	0.004	4.00	0.027	143.34	0.024	136.68	0.028	626.71
81	1109303-20 200X	5.824	15147.82	0.004	3.99	4.230	11962.13	4.464	10540.91	4.573	49983.21
82	1109303-21 200X	6.859	17533.52	0.001	1.33	15.641	43482.28	17.054	39447.78	17.207	184518.00
83	1109304-22 200X	7.592	19549.54	0.004	3.32	18.390	50976.25	20.540	47374.68	20.333	217428.78
84	1109304-23 200X	7.858	20073.38	0.001	1.33	15.703	44358.49	17.440	40971.58	17.430	189887.23
85	1109305-21 200X	6.941	17827.30	0.000	0.67	13.421	37542.10	15.186	35354.01	14.873	160513.69
86	1109305-22 200X	7.495	19162.31	0.003	2.67	0.278	846.73	0.330	846.74	0.327	3850.40
87	1109306-21 200X	6.207	16395.68	0.002	2.00	15.909	44732.53	17.845	41723.76	17.856	193626.54
88	CCV	10.179	27648.19	3.119	2467.06	5.209	15378.80	5.328	13096.46	5.217	59415.47
89	CCB	0.004	53.34	0.001	1.33	-0.008	40.00	-0.026	16.67	-0.008	203.34
90	IP111007-4MB ...	0.008	66.67	0.001	2.00	-0.005	50.00	-0.007	63.33	0.000	306.68
91	IM111007-4RVS...	0.116	336.69	0.027	19.98	0.049	200.01	0.031	150.01	0.048	816.72
92	IM111007-4LCS...	10.033	26686.56	2.851	2251.74	5.074	15028.40	5.191	12816.14	5.087	58217.14
93	1109363-1 100X	27.448	73158.19	0.032	24.96	3.593	10707.77	1.988	4984.43	2.299	26593.44

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# Batch Summary Report

Analyte Table

	Sample Name	88 Sr [1]		111 Cd [1]		206 (Pb) [1]		207 (Pb) [1]		208 Pb [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS
94	1109363-1D 100X	24.192	64397.31	0.026	20.30	3.976	11731.85	1.932	4794.31	2.432	27827.73
95	1109363-1L 500X	5.448	13933.17	0.009	7.26	0.747	2160.28	0.388	983.42	0.467	5350.65
96	1109363-1MS 1...	26.728	71044.50	0.377	290.73	4.673	13953.93	2.633	6585.10	3.114	36001.28
97	1109363-1MSD ...	25.753	69514.78	0.325	248.06	4.558	13733.70	2.535	6408.37	2.991	34920.15
98	1109363-2 100X	3.829	9603.33	0.014	10.53	1.266	3690.64	0.823	2040.27	0.921	10485.28
99	1109363-3 10X	30.501	81745.12	0.075	58.49	6.449	19741.03	6.210	15832.59	6.201	73269.70
100	CCV	9.971	26516.59	3.037	2319.71	5.088	15165.15	5.296	13156.46	5.075	58393.68
101	CCB	0.004	53.34	0.001	1.33	-0.007	40.00	-0.019	30.00	-0.011	173.34
102	1109363-4 10X	35.936	97428.79	0.073	57.84	7.160	22034.16	6.778	17361.04	6.879	81713.83
103	1109363-5 10X	34.271	93861.67	0.077	61.87	6.566	20051.22	6.050	15371.99	6.227	73349.89
104	1109363-6 10X	30.711	82707.29	0.093	73.18	6.763	20675.58	6.245	15899.29	6.377	75243.59
105	1109363-7 10X	40.056	107119.96	0.061	49.12	7.248	22010.76	6.534	16539.98	6.760	79241.87
106	1109363-8 10X	33.888	90700.20	0.048	38.62	8.018	23917.11	6.219	15462.15	6.643	76514.20
107	1109363-9 10X	20.596	57875.23	0.074	59.14	6.408	19767.31	6.164	15846.03	6.403	76237.41
108	1109363-10 10X	34.338	93324.77	0.119	93.89	6.704	20989.25	6.471	16880.47	6.429	77718.07
109	1109363-11 10X	25.100	68858.36	0.093	73.87	5.970	17938.49	5.862	14674.62	5.834	67679.40
110	1109363-12 100X	12.817	34294.44	0.035	27.52	5.740	17330.96	2.067	5251.21	2.944	34460.85
111	CCV	10.108	27371.13	3.155	2485.69	5.175	15432.24	5.104	12679.42	5.138	59145.74
112	CCB	-0.003	36.67	0.001	1.33	-0.005	46.67	-0.017	36.67	-0.013	153.34
113	IP111010-7MB ...	0.008	63.33	0.002	2.00	-0.004	50.00	-0.004	63.34	0.001	293.35
114	IM111010-7RVS...	0.124	350.02	0.039	27.98	0.041	170.01	0.027	133.34	0.046	766.72
115	IM111010-7LCS...	9.761	25434.53	2.838	2167.77	4.911	14157.40	5.216	12519.31	5.109	56815.43
116	1110021-1 200X	57.284	150997.95	0.002	2.54	46.935	133303.42	52.901	124862.39	52.651	576491.76
117	1110021-1D 200X	66.123	179049.47	0.003	3.20	52.034	158063.89	57.552	145489.38	57.590	675042.83
118	1110021-1L 10...	11.526	28830.14	0.009	7.31	9.518	25800.33	10.377	23403.01	10.507	109809.66
119	1110021-1MS 2...	66.171	173848.49	0.163	124.40	50.569	148742.09	55.700	136220.96	56.669	642799.92
120	1110021-1MSD ...	64.455	172357.02	0.177	135.75	52.186	150521.59	57.144	137041.65	58.114	646403.52
121	1110021-2 200X	56.250	148744.74	0.008	6.54	49.875	142761.59	56.011	133286.30	56.187	620195.85
122	1110021-3 200X	60.001	157406.02	0.005	4.53	51.691	148291.34	57.258	136569.67	57.807	639499.91
123	CCV	10.369	27327.43	2.969	2284.38	5.130	15351.86	4.978	12412.46	5.064	58514.19
124	CCB	-0.007	26.67	0.001	1.33	-0.002	53.33	-0.014	40.00	0.001	283.35

# Batch Summary Report

Analyte Table

	Sample Name	88 Sr [1]		111 Cd [1]		206 (Pb) [1]		207 (Pb) [1]		208 Pb [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS
125	1110021-4 200X	61.343	160314.79	0.009	7.83	77.242	225672.86	85.088	206679.33	86.326	972537.58
126	1110021-5 200X	54.524	143748.79	0.022	17.15	79.028	223307.00	87.982	206709.69	88.350	962701.12
127	1110021-6 200X	61.518	157452.75	0.006	5.15	75.442	214096.18	84.002	198172.38	83.832	917320.65
128	1110021-7 200X	61.383	159178.82	0.008	6.49	76.497	215410.94	85.052	199157.56	85.240	925701.31
129	1110021-8 200X	62.573	162468.11	0.010	7.86	56.690	160796.80	63.023	148593.63	62.962	688582.15
130	1110021-9 200X	64.349	167022.11	0.001	1.17	66.043	183478.22	73.483	169730.95	73.920	791859.44
131	1110021-10 200X	60.373	153299.02	0.005	4.54	52.153	147461.84	57.671	135603.86	58.266	635323.80
132	1110021-11 200X	67.245	169166.77	0.006	5.17	67.294	191362.77	75.118	177593.30	75.225	824918.29
133	1110021-12 200X	62.197	161917.59	0.003	3.19	57.725	164959.01	64.214	152577.57	64.375	709387.81
134	1110021-13 200X	60.039	155510.95	0.003	3.20	49.014	138480.29	54.730	128561.58	54.852	597626.47
135	CCV	9.986	25741.56	2.973	2227.79	5.172	14761.40	5.230	12429.15	5.213	57422.92
136	CCB	0.018	83.34	0.000	0.67	0.015	93.34	0.009	86.67	0.018	443.35
137	1110021-14 200X	68.271	172408.07	0.003	2.54	48.929	139730.39	54.860	130243.21	54.932	604911.16
138	1110021-15 200X	68.763	174479.33	0.006	5.21	50.068	139048.25	55.933	129163.53	56.078	600470.73
139	1110021-16 200X	64.007	166296.17	0.010	7.88	45.317	131544.50	50.560	122033.19	50.584	566265.01
140	1110021-17 200X	67.824	179064.80	0.016	12.53	55.281	159614.87	62.547	150159.41	61.912	689353.38
141	1109308-21 200X	52.562	137341.20	0.006	5.01	133.561	390054.70	148.354	360196.01	149.184	1679964.36
142	1109326-1 200X	8.711	21969.26	0.024	17.98	0.022	120.01	0.018	116.67	0.022	523.37
143	1109326-2 200X	5.251	13019.22	0.007	5.30	0.008	83.34	-0.001	73.34	0.010	400.02
144	1109326-3 200X	15.874	40127.96	0.024	17.92	0.004	76.67	-0.005	66.67	0.004	346.69
145	CCV	9.974	26686.82	3.099	2384.39	5.165	15362.20	5.109	12656.05	5.098	58541.11
146	CCB	-0.013	13.33	0.001	1.33	0.006	73.34	-0.021	26.67	-0.011	170.01
147	JP111011-6MB ...	0.006	56.67	0.004	3.33	-0.005	46.67	-0.015	40.00	-0.004	243.35
148	IM111011-6RVS...	0.086	250.01	0.036	24.64	0.051	193.34	0.055	190.01	0.061	900.05
149	IM111011-6LCS...	9.618	25184.01	3.073	2295.14	4.939	14454.49	5.002	12198.90	5.064	57196.25
150	1110049-1 10X	0.014	76.67	0.004	3.33	-0.002	53.33	-0.025	16.67	-0.004	233.34
151	1110049-1D 10X	-0.001	40.00	0.005	3.98	0.001	60.00	-0.002	66.67	-0.003	253.35
152	1110049-1L 50X	0.014	73.34	0.010	7.33	0.002	63.34	0.008	86.67	-0.001	260.01
153	1110049-1MS 10X	9.789	25898.83	3.027	2277.07	5.076	14781.35	5.097	12362.42	5.026	56494.19
154	1110049-1MSD ...	9.443	25357.56	3.009	2300.48	5.035	14774.82	5.237	12799.44	5.091	57669.36
155	1110049-3 10X	1033.493	2761622.46	0.066	53.63	-0.001	63.34	-0.010	56.67	-0.003	276.68

# Batch Summary Report

Analyte Table

	Sample Name	88 Sr [1]		111 Cd [1]		206 (Pb) [1]		207 (Pb) [1]		208 Pb [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS	Conc. [ppb]	CPS
156	ZZZZZZ	0.494	1280.12	0.001	1.32	0.002	63.34	-0.009	53.33	0.002	300.01
157	CCV	10.038	27641.54	2.933	2354.31	5.300	15635.67	5.127	12606.05	5.257	59890.39
158	CCB	-0.007	26.67	0.004	3.33	-0.001	56.67	-0.023	23.33	-0.010	186.68
159	1110049-5 10X	1014.444	2860095.69	1.980	1638.18	0.031	160.01	0.034	170.01	0.028	653.37
160	1110049-6 10X	1036.427	3047604.64	1.862	1608.55	0.038	183.34	0.014	116.67	0.025	613.37
161	1110049-9 10X	1131.643	3217169.01	0.009	8.98	-0.002	63.34	-0.006	70.00	-0.006	263.35
162	1110049-4 10X	0.102	313.35	0.004	3.32	-0.007	43.34	-0.026	16.67	-0.016	126.67
163	ZZZZZZ	0.041	146.67	0.003	2.67	-0.012	26.67	-0.015	40.00	-0.013	156.67
164	CCV	10.372	28102.28	3.054	2425.67	4.930	14707.99	5.118	12719.42	5.082	58528.14
165	CCB	0.152	420.03	0.004	3.33	-0.010	33.33	-0.027	13.33	-0.015	126.67

# Batch Summary Report

Analyte Table

	Sample Name	232 Th [1]		238 U [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS
1	blank		36.67		35.56
2	blank	0.000	23.33	0.000	37.78
3	blank	0.000	26.67	0.000	36.67
4	H/1000	0.010	160.01	0.008	130.00
5	H/100	0.087	1180.11	0.095	1216.74
6	H/10	0.979	13710.49	1.002	13178.33
7	HIGH	10.002	140627.80	10.000	132048.19
8	ICV	1.856	26071.21	1.918	25315.48
9	ICB	0.002	53.34	-0.002	16.67
10	CRI1	0.021	290.02	0.009	150.00
11	CRI2	0.031	416.70	0.018	254.45
12	ICSA	0.012	196.68	0.000	45.56
13	ICSAB	1.078	14648.01	1.031	13177.23
14	IP111010-3MB ...	-0.002	0.00	-0.002	8.89
15	IM111010-3RVS...	0.026	326.69	0.009	137.78
16	IM111010-3LCS...	0.945	12132.30	0.980	11830.49
17	1110039-1 10X	0.003	66.67	0.492	6002.42
18	1110039-2 10X	-0.001	20.00	0.648	8017.87
19	1110039-3 10X	0.005	83.34	0.018	237.78
20	CCV	0.940	12229.05	0.988	12092.89
21	CCB	0.001	36.67	-0.003	7.78
22	1110039-3D 10X	0.002	56.67	0.019	256.68
23	1110039-3L 50X	0.013	180.01	0.004	77.78
24	1110039-3MS 10X	0.964	12225.79	1.009	12025.12
25	1110039-3MSD ...	0.987	12893.15	1.016	12472.18
26	1110051-2 10X	0.013	200.01	0.290	3569.39
27	1110051-3 10X	0.000	30.00	0.407	4859.76
28	1110051-4 10X	0.000	33.33	0.205	2496.92
29	1110051-5 10X	0.004	76.67	0.309	3603.84
30	1110051-6 10X	-0.001	20.00	0.209	2494.70
31	1110051-7 10X	0.001	46.67	0.286	3436.02



# Batch Summary Report

Analyte Table

	Sample Name	232 Th [1]		238 U [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS
32	CCV	0.994	12202.36	1.049	12108.47
33	CCB	0.000	23.33	-0.002	11.11
34	1110051-7D 10X	0.000	26.67	0.288	3359.34
35	1110051-7L 50X	-0.001	10.00	0.055	664.47
36	1110051-7MS 10X	1.010	12412.57	1.312	15150.21
37	1110051-7MSD ...	1.056	12826.37	1.314	14997.88
38	1110053-1 10X	0.001	36.67	0.353	4310.72
39	1110053-2 10X	0.001	40.00	0.382	4558.56
40	1110057-2 10X	0.002	46.67	10.871	124140.54
41	1110057-2 100...	-0.001	13.33	0.006	104.45
42	CCV	1.019	12586.05	1.039	12067.39
43	CCB	0.001	33.33	-0.002	14.44
44	IP111011-4MB ...	-0.001	10.00	-0.003	3.33
45	IM111011-4RVS...	0.017	223.34	0.009	134.45
46	IM111011-4LCS...	0.956	11538.53	0.991	11258.92
47	1110118-1 10X	0.002	46.67	0.823	9557.71
48	1110118-2 10X	0.003	66.67	0.790	9179.71
49	1110118-2D 10X	-0.001	20.00	0.752	8855.03
50	1110118-2L 50X	0.000	26.67	0.164	1893.49
51	1110118-2MS 10X	1.034	13143.29	1.835	21923.29
52	1110118-2MSD ...	0.998	12329.25	1.802	20940.76
53	1110118-3 10X	0.000	30.00	3.774	44870.88
54	CCV	1.004	12562.67	1.038	12205.21
55	CCB	0.000	23.33	-0.002	12.22
56	1110118-4 10X	0.015	213.64	0.165	1925.72
57	1110118-5 10X	0.001	43.33	0.158	1845.70
58	1110118-6 10X	0.000	26.67	0.358	4235.13
59	1110118-7 10X	0.000	23.33	0.230	2691.40
60	1110118-8 10X	0.000	33.33	0.239	2831.42
61	1110118-9 10X	-0.001	13.33	0.182	2172.42
62	1110118-10 10X	-0.001	13.33	0.017	236.67

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# Batch Summary Report

Analyte Table

	Sample Name	232 Th [1]		238 U [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS
63	1110118-11 10X	-0.001	10.00	0.044	577.80
64	1110118-12 10X	-0.001	13.33	0.026	348.90
65	CCV	0.967	12452.68	1.019	12324.25
66	CCB	0.003	60.00	-0.002	10.00
67	EX111010-5MB...	0.000	26.67	0.003	71.11
68	EXM111010-5RV...	0.018	230.02	0.008	120.00
69	EXM111010-5LC...	1.009	12569.47	1.033	12109.62
70	1109234-17 200X	0.076	906.75	2.078	22800.29
71	1109234-17D 2...	0.096	1090.11	2.276	23755.09
72	1109234-17L 1...	0.014	176.68	0.417	4199.55
73	1109234-17MS ...	0.136	1643.52	2.198	24683.52
74	1109234-17MSD...	0.124	1446.82	2.274	24587.52
75	1109234-18 200X	0.004	73.34	2.659	28091.63
76	1109235-16 200X	0.689	7699.12	2.924	30597.64
77	CCV	1.021	12369.23	1.038	11817.13
78	CCB	0.002	43.33	-0.002	7.78
79	1109235-17 200X	0.410	5141.21	4.591	53885.27
80	1109302-11 200X	0.002	50.00	3.363	35967.70
81	1109303-20 200X	0.213	2430.34	3.365	35769.53
82	1109303-21 200X	0.112	1260.12	3.313	34568.81
83	1109304-22 200X	0.523	5748.13	3.415	35168.00
84	1109304-23 200X	0.230	2617.04	2.393	25417.85
85	1109305-21 200X	0.115	1310.14	2.094	21939.96
86	1109305-22 200X	0.050	590.04	2.937	31202.32
87	1109306-21 200X	0.010	143.35	2.976	31664.44
88	CCV	1.051	12325.83	1.043	11512.43
89	CCB	-0.001	10.00	-0.001	20.00
90	IP111007-4MB ...	-0.001	13.33	-0.001	22.22
91	IM111007-4RVS...	0.021	253.35	0.010	130.00
92	IM111007-4LCS...	0.982	11715.29	1.015	11383.49
93	1109363-1 100X	0.717	8282.80	10.622	114925.46

## Batch Summary Report

Analyte Table

	Sample Name	232 Th [1]		238 U [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS
94	1109363-1D 100X	0.711	8299.51	7.444	81482.23
95	1109363-1L 500X	0.123	1380.14	2.078	21487.07
96	1109363-1MS 1...	0.817	9486.93	8.139	88591.30
97	1109363-1MSD ...	0.825	9663.86	7.526	82656.41
98	1109363-2 100X	0.348	3860.73	4.515	46775.62
99	1109363-3 10X	3.707	43867.60	2.324	25851.88
100	CCV	1.066	12362.52	1.048	11425.74
101	CCB	0.000	23.33	-0.002	16.67
102	1109363-4 10X	4.134	48947.17	2.588	28808.53
103	1109363-5 10X	3.977	45931.09	2.176	23625.94
104	1109363-6 10X	4.127	48502.45	2.609	28816.32
105	1109363-7 10X	4.400	51205.20	5.821	63625.97
106	1109363-8 10X	3.869	45298.78	14.942	164381.13
107	1109363-9 10X	3.128	38111.33	1.072	12300.86
108	1109363-10 10X	4.404	51874.51	0.952	10567.32
109	1109363-11 10X	3.284	38746.21	0.824	9159.67
110	1109363-12 100X	0.978	11421.78	3.463	37911.51
111	CCV	1.020	12212.48	1.038	11680.36
112	CCB	0.003	53.33	0.001	38.89
113	IP111010-7MB ...	0.000	23.33	0.003	64.45
114	IM111010-7RVS...	0.022	260.02	0.020	234.45
115	IM111010-7LCS...	0.946	11048.05	0.995	10918.66
116	1110021-1 200X	2.458	27431.56	11.531	120930.21
117	1110021-1D 200X	2.571	30406.67	12.881	143127.55
118	1110021-1L 10...	0.471	5114.50	2.229	22673.35
119	1110021-1MS 2...	3.165	35194.58	13.004	135800.66
120	1110021-1MSD ...	2.914	33413.51	12.587	135537.38
121	1110021-2 200X	2.801	31078.17	12.224	127310.42
122	1110021-3 200X	3.247	36403.52	11.966	126071.97
123	CCV	1.020	11878.79	1.049	11484.62
124	CCB	0.003	50.00	0.000	27.78

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# Batch Summary Report

Analyte Table

	Sample Name	232 Th [1]		238 U [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS
125	1110021-4 200X	7.102	79523.40	17.353	182499.92
126	1110021-5 200X	7.922	89332.84	16.563	175420.83
127	1110021-6 200X	9.561	105090.89	16.327	168545.12
128	1110021-7 200X	9.721	105961.58	16.706	171013.12
129	1110021-8 200X	3.470	39123.99	13.049	138105.15
130	1110021-9 200X	3.267	35822.47	15.279	157323.42
131	1110021-10 200X	3.278	35541.51	12.489	127148.32
132	1110021-11 200X	3.042	33744.04	15.118	157458.53
133	1110021-12 200X	3.286	37536.90	12.892	138365.50
134	1110021-13 200X	3.892	43724.61	11.508	121455.46
135	CCV	1.033	11551.82	1.049	11033.20
136	CCB	0.003	53.34	0.005	78.89
137	1110021-14 200X	2.954	32210.26	12.317	126090.27
138	1110021-15 200X	3.021	32715.04	11.308	115020.72
139	1110021-16 200X	2.510	28465.66	10.313	109812.23
140	1110021-17 200X	2.413	27540.60	11.842	124621.47
141	1109308-21 200X	16.095	183842.05	16.537	177445.09
142	1109326-1 200X	0.010	136.67	6.810	69416.37
143	1109326-2 200X	0.006	83.33	2.177	21830.90
144	1109326-3 200X	0.000	26.67	9.311	96239.38
145	CCV	0.961	11405.16	1.009	11263.40
146	CCB	0.000	23.33	0.002	46.68
147	IP111011-6MB ...	0.003	50.00	0.002	51.11
148	IM111011-6RVS...	0.020	220.02	0.015	171.12
149	IM111011-6LCS...	1.013	11518.51	1.044	11166.65
150	1110049-1 10X	0.003	50.00	0.002	53.33
151	1110049-1D 10X	0.000	20.00	0.000	36.67
152	1110049-1L 50X	0.001	26.67	0.002	51.11
153	1110049-1MS 10X	1.018	11792.13	1.019	11092.15
154	1110049-1MSD ...	1.065	12072.31	1.033	11015.42
155	1110049-3 10X	0.011	153.34	63.854	684005.27

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# Batch Summary Report

Analyte Table

	Sample Name	232 Th [1]		238 U [1]	
		Conc. [ppb]	CPS	Conc. [ppb]	CPS
156	ZZZZZZ	0.001	40.00	0.022	253.34
157	CCV	1.004	11775.34	1.044	11490.23
158	CCB	0.004	60.00	-0.002	10.00
159	1110049-5 10X	0.006	100.01	16.525	185711.31
160	1110049-6 10X	0.003	63.34	17.147	198459.94
161	1110049-9 10X	0.002	50.00	5.988	67692.17
162	1110049-4 10X	-0.002	0.00	0.003	58.89
163	ZZZZZZ	-0.001	16.67	-0.001	23.34
164	CCV	1.012	11681.97	1.041	11294.56
165	CCB	0.000	20.00	-0.001	20.00

# Batch Summary Report

ISTD Table

	Sample Name	103 Rh (ISTD) [1]		115 In (ISTD) [1]		195 Pt (ISTD) [1]		209 Bi (ISTD) [1]	
		CPS	Recovery%	CPS	Recovery%	CPS	Recovery%	CPS	Recovery%
1	blank	72654.06		67852.83		29243.11		46331.10	
2	blank	70614.39	100.0	69084.08	100.0	28568.68	100.0	44746.00	100.0
3	blank	71451.79	100.0	88424.40	100.0	28799.34	100.0	45147.50	100.0
4	H/1000	75949.73	106.3	72942.85	106.6	30779.57	106.9	48976.49	108.5
5	H/100	81409.57	113.9	76257.07	111.4	31761.88	110.3	50253.71	111.3
6	H/10	84302.83	118.0	80130.22	117.1	33629.81	116.8	52913.86	117.2
7	HIGH	83242.16	116.5	80173.36	117.2	33853.28	117.5	54091.04	119.8
8	ICV	85091.71	119.1	81100.35	118.5	33752.71	117.2	53431.91	118.3
9	ICB	70618.17	98.8	67045.81	98.0	27900.87	96.9	43254.93	95.8
10	CRI1	77449.72	108.4	73829.72	107.9	30338.53	105.3	49775.64	110.3
11	CRI2	76672.93	107.3	72206.52	105.5	30241.84	105.0	48772.42	108.0
12	ICSA	83634.55	117.1	81649.61	119.3	34197.20	118.7	53421.68	118.3
13	ICSAB	85567.93	119.8	83036.91	121.4	32647.20	113.4	53619.18	118.8
14	IP111010-3MB ...	71545.92	100.1	67423.00	98.5	28007.57	97.3	44772.75	99.2
15	IM111010-3RVS...	73517.57	102.9	68471.58	100.1	28321.53	98.3	45812.78	101.5
16	IM111010-3LCS...	80237.55	112.3	76220.67	111.4	30833.24	107.1	49775.49	110.3
17	1110039-1 10X	78555.31	109.9	78341.02	114.5	31050.36	107.8	50535.06	111.9
18	1110039-2 10X	78197.36	109.4	76530.46	111.8	31524.57	109.5	49635.45	109.9
19	1110039-3 10X	74774.12	104.6	73277.36	107.1	29299.92	101.7	49929.60	110.6
20	CCV	79248.89	110.9	76656.90	112.0	31274.03	108.6	49481.19	109.6
21	CCB	68210.73	95.5	65500.56	95.7	26351.12	91.5	42175.12	93.4
22	1110039-3D 10X	75266.66	105.3	71908.43	105.1	28755.50	99.8	47156.87	104.5
23	1110039-3L 50X	71787.34	100.5	67510.23	98.7	28435.09	98.7	46127.05	102.2
24	1110039-3MS 10X	78096.00	109.3	73553.43	107.5	30445.94	105.7	48594.99	107.6
25	1110039-3MSD ...	82475.89	115.4	78244.82	114.4	31407.94	109.1	52331.46	115.9
26	1110051-2 10X	77674.01	108.7	76368.48	111.6	31197.49	108.3	49420.91	109.5
27	1110051-3 10X	78534.77	109.9	75485.16	110.3	30389.12	105.5	49611.86	109.9
28	1110051-4 10X	79211.94	110.9	74668.85	109.1	30689.53	106.6	50066.63	110.9
29	1110051-5 10X	78092.75	109.3	74446.59	108.8	29677.54	103.0	49287.65	109.2
30	1110051-6 10X	79733.71	111.6	75217.29	109.9	30068.26	104.4	50217.65	111.2
31	1110051-7 10X	78595.36	110.0	75974.67	111.0	30402.47	105.6	49672.10	110.0



# Batch Summary Report

ISTD Table

	Sample Name	103 Rh (ISTD) [1]		115 In (ISTD) [1]		195 Pt (ISTD) [1]		209 Bi (ISTD) [1]	
		CPS	Recovery%	CPS	Recovery%	CPS	Recovery%	CPS	Recovery%
32	CCV	77550.40	108.5	73663.70	107.7	29497.07	102.4	48655.24	107.8
33	CCB	67815.93	94.9	64661.00	94.5	25539.81	88.7	42663.46	94.5
34	1110051-7D 10X	77871.49	109.0	74246.83	108.5	29510.60	102.5	48655.21	107.8
35	1110051-7L 50X	76622.46	107.2	71480.86	104.5	29250.10	101.6	47197.41	104.5
36	1110051-7MS 10X	77637.95	108.7	75867.27	110.9	29533.91	102.6	50347.60	111.5
37	1110051-7MSD ...	78766.59	110.2	74374.96	108.7	29193.38	101.4	48685.25	107.8
38	1110053-1 10X	77764.47	108.8	75579.87	110.5	31080.41	107.9	48668.77	107.8
39	1110053-2 10X	77738.11	108.8	75198.57	109.9	30298.66	105.2	49534.92	109.7
40	1110057-2 10X	77097.88	107.9	76164.56	111.3	29279.85	101.7	46207.00	102.3
41	1110057-2 100...	72462.96	101.4	71075.91	103.9	27830.72	96.6	45762.83	101.4
42	CCV	78050.30	109.2	74936.80	109.5	29674.03	103.0	48926.81	108.4
43	CCB	67843.52	95.0	65086.62	95.1	26368.00	91.6	43318.89	95.9
44	IP111011-4MB ...	68552.91	95.9	64881.84	94.8	26210.88	91.0	44007.48	97.5
45	IM111011-4RVS...	71727.43	100.4	68449.47	100.0	27620.29	95.9	45906.69	101.7
46	IM111011-4LCS...	76824.00	107.5	73463.12	107.4	29032.74	100.8	49006.68	108.5
47	1110118-1 10X	77831.21	108.9	76284.55	111.5	29644.11	102.9	50023.53	110.8
48	1110118-2 10X	78685.80	110.1	76965.95	112.5	29660.64	103.0	49166.87	108.9
49	1110118-2D 10X	78244.19	109.5	76704.00	112.1	30045.11	104.3	50672.47	112.2
50	1110118-2L 50X	76686.40	107.3	74286.60	108.6	29035.94	100.8	49357.84	109.3
51	1110118-2MS 10X	78831.19	110.3	77589.74	113.4	30579.63	106.2	50060.74	110.9
52	1110118-2MSD ...	76980.69	107.7	75925.10	111.0	29741.10	103.3	49260.87	109.1
53	1110118-3 10X	78022.81	109.2	76463.06	111.7	30455.79	105.8	49043.18	108.6
54	CCV	77717.74	108.8	76387.02	111.6	30068.38	104.4	50862.67	112.7
55	CCB	73459.63	102.8	70905.61	103.6	28956.46	100.5	46612.93	103.2
56	1110118-4 10X	79322.20	111.0	76308.94	111.5	29286.86	101.7	50063.55	110.9
57	1110118-5 10X	79543.60	111.3	77045.26	112.6	29400.40	102.1	50096.71	111.0
58	1110118-6 10X	79760.90	111.6	77521.64	113.3	30048.19	104.3	50056.25	110.9
59	1110118-7 10X	79878.97	111.8	77688.72	113.5	29617.56	102.8	50099.88	111.0
60	1110118-8 10X	81088.05	113.5	78093.92	114.1	30001.24	104.2	50454.59	111.8
61	1110118-9 10X	81077.72	113.5	77835.50	113.8	30031.34	104.3	50193.82	111.2
62	1110118-10 10X	78722.52	110.2	76586.84	111.9	30365.50	105.4	50896.32	112.7

# Batch Summary Report

ISTD Table

	Sample Name	103 Rh (ISTD) [1]		115 In (ISTD) [1]		195 Pt (ISTD) [1]		209 Bi (ISTD) [1]	
		CPS	Recovery%	CPS	Recovery%	CPS	Recovery%	CPS	Recovery%
63	1110118-11 10X	81473.65	114.0	78841.80	115.2	31040.53	107.8	51836.19	114.8
64	1110118-12 10X	79794.64	111.7	78853.83	115.2	30859.85	107.2	51117.12	113.2
65	CCV	81617.04	114.2	78980.97	115.4	30910.23	107.3	51207.99	113.4
66	CCB	76467.50	107.0	72109.30	105.4	28732.92	99.8	47298.43	104.8
67	EX111010-5MB...	80140.45	112.2	77301.10	113.0	29800.97	103.5	50360.78	111.5
68	EXM111010-5RV...	72262.21	101.1	68818.20	100.6	27900.74	96.9	45933.20	101.7
69	EXM111010-5LC...	80059.64	112.0	74875.10	109.4	29944.80	104.0	50264.19	111.3
70	1109234-17 200X	73400.88	102.7	71114.38	103.9	28071.17	97.5	47314.43	104.8
71	1109234-17D 2...	71803.70	100.5	68748.61	100.5	26765.20	92.9	46421.53	102.8
72	1109234-17L 1...	68816.95	96.3	65055.76	95.1	25583.13	88.8	43445.50	96.2
73	1109234-17MS ...	76698.45	107.3	73938.26	108.1	28849.87	100.2	49335.21	109.3
74	1109234-17MSD...	71150.52	99.6	69418.16	101.5	27670.55	96.1	46909.47	103.9
75	1109234-18 200X	71476.49	100.0	68667.86	100.4	27035.72	93.9	46294.06	102.5
76	1109235-16 200X	69747.85	97.6	68574.88	100.2	26798.41	93.1	46868.84	103.8
77	CCV	74606.58	104.4	71173.39	104.0	29102.99	101.1	47548.62	105.3
78	CCB	66250.00	92.7	63452.72	92.7	25376.11	88.1	42573.13	94.3
79	1109235-17 200X	78792.44	110.3	74911.32	109.5	30122.06	104.6	50863.75	112.7
80	1109302-11 200X	71546.62	100.1	69243.62	101.2	27383.02	95.1	46739.02	103.5
81	1109303-20 200X	72058.16	100.8	69222.56	101.2	27219.45	94.5	45645.77	101.1
82	1109303-21 200X	70845.61	99.2	68653.61	100.3	26735.33	92.8	44960.21	99.6
83	1109304-22 200X	71371.99	99.9	67934.81	99.3	26361.12	91.5	44853.15	99.3
84	1109304-23 200X	70845.99	99.2	69096.34	101.0	27206.08	94.5	45742.41	101.3
85	1109305-21 200X	71194.14	99.6	68678.01	100.4	26828.55	93.2	45254.39	100.2
86	1109305-22 200X	70882.72	99.2	67907.80	99.2	27206.20	94.5	45592.42	101.0
87	1109306-21 200X	73182.93	102.4	68992.62	100.8	27279.44	94.7	45481.83	100.7
88	CCV	75393.34	105.5	73166.60	106.9	28234.58	98.0	47574.81	105.4
89	CCB	67063.61	93.9	64742.19	94.6	24755.21	86.0	43529.42	96.4
90	IP111007-4MB ...	72036.84	100.8	68811.32	100.6	27306.70	94.8	47034.59	104.2
91	IM111007-4RVS...	69309.56	97.0	66754.92	97.6	25906.94	90.0	45009.97	99.7
92	IM111007-4LCS...	73816.66	103.3	73107.33	106.8	28642.10	99.5	47802.53	105.9
93	1109363-1 100X	74043.16	103.6	70633.31	103.2	27723.57	96.3	47986.52	106.3



# Batch Summary Report

ISTD Table

	Sample Name	103 Rh (ISTD) [1]		115 In (ISTD) [1]		195 Pt (ISTD) [1]		209 Bi (ISTD) [1]	
		CPS	Recovery%	CPS	Recovery%	CPS	Recovery%	CPS	Recovery%
94	1109363-1D 100X	73960.03	103.5	70843.88	103.5	28047.64	97.4	47527.97	105.3
95	1109363-1L 500X	70839.21	99.1	68657.33	100.3	26488.08	92.0	45384.57	100.5
96	1109363-1MS 1...	73823.28	103.3	71227.32	104.1	27897.32	96.9	48129.85	106.6
97	1109363-1MSD ...	74954.61	104.9	70504.88	103.0	28144.71	97.7	48581.50	107.6
98	1109363-2 100X	69395.95	97.1	68266.85	99.8	26544.87	92.2	46401.57	102.8
99	1109363-3 10X	74438.45	104.2	71926.47	105.1	28484.89	98.9	49404.55	109.4
100	CCV	73852.96	103.4	70682.00	103.3	27864.02	96.8	48107.26	106.6
101	CCB	65928.27	92.3	63128.16	92.3	25075.61	87.1	42322.58	93.7
102	1109363-4 10X	75322.96	105.4	72128.63	105.4	28498.32	99.0	49721.96	110.1
103	1109363-5 10X	76113.81	106.5	73430.04	107.3	27790.58	96.5	49266.91	109.1
104	1109363-6 10X	74790.89	104.7	72275.53	105.6	28277.89	98.2	49350.85	109.3
105	1109363-7 10X	74312.15	104.0	73504.21	107.4	28000.79	97.2	49093.44	108.7
106	1109363-8 10X	74824.17	104.7	72513.37	106.0	28201.31	97.9	48183.68	106.7
107	1109363-9 10X	78032.57	109.2	72753.57	106.3	29330.06	101.8	49832.62	110.4
108	1109363-10 10X	75514.01	105.7	72552.96	106.0	28341.37	98.4	50588.69	112.1
109	1109363-11 10X	76200.10	106.6	73049.55	106.8	28398.26	98.6	48494.74	107.4
110	1109363-12 100X	74284.93	104.0	71191.00	104.0	28034.27	97.3	48715.67	107.9
111	CCV	75148.89	105.2	72309.82	105.7	28772.34	99.9	48086.97	106.5
112	CCB	66466.83	93.0	63391.54	92.6	25509.76	88.6	43442.25	96.2
113	IP111010-7MB ...	67006.24	93.8	63710.80	93.1	24888.55	86.4	42770.17	94.7
114	IM111010-7RVS...	68084.44	95.3	64280.61	93.9	25589.77	88.9	43298.40	95.9
115	IM111010-7LCS...	72278.99	101.2	70702.27	103.3	28040.83	97.4	46454.81	102.9
116	1110021-1 200X	73317.83	102.6	70277.78	102.7	26902.02	93.4	45976.77	101.8
117	1110021-1D 200X	75230.14	105.3	72835.65	106.4	28445.06	98.8	49187.10	108.9
118	1110021-1L 10...	69409.39	97.1	65755.87	96.1	26030.63	90.4	43773.18	97.0
119	1110021-1MS 2...	73005.55	102.2	70178.10	102.6	26778.44	93.0	47621.78	105.5
120	1110021-1MSD ...	74385.51	104.1	70237.57	102.6	27596.64	95.8	46702.45	103.4
121	1110021-2 200X	73464.34	102.8	68790.26	100.5	26688.26	92.7	46341.10	102.6
122	1110021-3 200X	72902.10	102.0	68911.31	100.7	27002.40	93.8	46444.62	102.9
123	CCV	73142.53	102.4	71174.25	104.0	27987.62	97.2	48281.12	106.9
124	CCB	66259.46	92.7	62814.03	91.8	24861.93	86.3	41817.82	92.6

# Batch Summary Report

ISTD Table

	Sample Name	103 Rh (ISTD) [1]		115 In (ISTD) [1]		195 Pt (ISTD) [1]		209 Bi (ISTD) [1]	
		CPS	Recovery%	CPS	Recovery%	CPS	Recovery%	CPS	Recovery%
125	1110021-4 200X	72650.93	101.7	70719.51	103.4	26958.93	93.6	47330.82	104.8
126	1110021-5 200X	73259.68	102.5	69905.09	102.2	27135.97	94.2	45759.48	101.4
127	1110021-6 200X	71126.89	99.5	68979.61	100.8	26461.19	91.9	45963.35	101.8
128	1110021-7 200X	72051.72	100.8	67752.34	99.0	26237.72	91.1	45605.58	101.0
129	1110021-8 200X	72168.41	101.0	69062.55	100.9	27145.81	94.3	45932.88	101.7
130	1110021-9 200X	72124.79	100.9	68780.69	100.5	26391.23	91.6	44987.15	99.6
131	1110021-10 200X	70548.28	98.7	67894.27	99.2	26097.39	90.6	45796.20	101.4
132	1110021-11 200X	69911.49	97.8	68847.56	100.6	26705.13	92.7	46050.27	102.0
133	1110021-12 200X	72328.98	101.2	69959.25	102.2	27503.16	95.5	46270.60	102.5
134	1110021-13 200X	71963.97	100.7	67789.35	99.1	27052.53	93.9	45742.45	101.3
135	CCV	71512.04	100.1	69338.10	101.3	26872.10	93.3	46023.72	101.9
136	CCB	62738.76	87.8	61026.59	89.2	24040.66	83.5	40260.10	89.2
137	1110021-14 200X	70199.37	98.2	66825.15	97.7	26230.87	91.1	46234.51	102.4
138	1110021-15 200X	70571.38	98.8	68475.55	100.1	26094.26	90.6	44959.80	99.6
139	1110021-16 200X	72191.76	101.0	68043.92	99.4	27302.81	94.8	46999.82	104.1
140	1110021-17 200X	73387.25	102.7	69185.55	101.1	27449.91	95.3	46745.58	103.5
141	1109308-21 200X	72590.46	101.6	69566.48	101.7	27539.84	95.6	47303.94	104.8
142	1109326-1 200X	69941.67	97.9	67350.21	98.4	26124.08	90.7	43879.96	97.2
143	1109326-2 200X	68666.24	96.1	66175.38	96.7	25673.24	89.1	44378.79	98.3
144	1109326-3 200X	70203.37	98.3	67430.98	98.5	26491.26	92.0	45197.62	100.1
145	CCV	74225.11	103.9	71187.09	104.0	28511.98	99.0	48019.86	106.4
146	CCB	64820.76	90.7	61330.95	89.6	24464.42	84.9	41145.87	91.1
147	IP111011-6MB ...	66366.44	92.9	63270.87	92.5	24858.68	86.3	42332.31	93.8
148	IM111011-6RVS...	66905.85	93.6	62417.22	91.2	24407.77	84.8	42305.79	93.7
149	IM111011-6LCS...	72623.67	101.6	69113.98	101.0	27322.86	94.9	47203.96	104.6
150	1110049-1 10X	65533.44	91.7	62276.90	91.0	24334.29	84.5	41329.24	91.5
151	1110049-1D 10X	65459.15	91.6	62860.31	91.9	25048.70	87.0	41924.53	92.9
152	1110049-1L 50X	63772.72	89.3	60946.05	89.1	23586.42	81.9	41289.18	91.5
153	1110049-1MS 10X	73381.38	102.7	69601.08	101.7	27824.11	96.6	46959.95	104.0
154	1110049-1MSD ...	74533.10	104.3	70752.24	103.4	27249.42	94.6	47314.56	104.8
155	1110049-3 10X	74284.88	104.0	74143.41	108.4	27463.17	95.4	47264.11	104.7

# Batch Summary Report

ISTD Table

	Sample Name	103 Rh (ISTD) [1]		115 In (ISTD) [1]		195 Pt (ISTD) [1]		209 Bi (ISTD) [1]	
		CPS	Recovery%	CPS	Recovery%	CPS	Recovery%	CPS	Recovery%
156	ZZZZZZ	69420.06	97.2	66098.34	96.6	25639.90	89.0	43034.44	95.3
157	CCV	76425.66	107.0	74344.00	108.7	28177.91	97.8	47598.65	105.4
158	CCB	67528.75	94.5	65022.57	95.0	25079.19	87.1	43425.78	96.2
159	1110049-5 10X	78367.50	109.7	76555.73	111.9	28802.36	100.0	48869.20	108.2
160	1110049-6 10X	81734.41	114.4	79935.39	116.8	29660.86	103.0	48926.12	108.4
161	1110049-9 10X	79017.61	110.6	80070.82	117.0	28959.10	100.6	49454.57	109.5
162	1110049-4 10X	72258.84	101.1	66373.80	97.0	25746.69	89.4	43913.56	97.3
163	ZZZZZZ	68659.67	96.1	66052.93	96.5	25205.83	87.5	42633.83	94.4
164	CCV	75158.69	105.2	73483.37	107.4	27716.93	96.2	48110.11	106.6
165	CCB	68743.45	96.2	63786.93	93.2	24731.68	85.9	42308.95	93.7

Calibration for 123SMPL\_11J12n00.D

Batch Folder: C:\ICPMH\1\DATA\11J12\00.B\

Analysis File: 11J12\00.batch.xml

DA Date-Time: 10/13/2011 8:48:41 AM

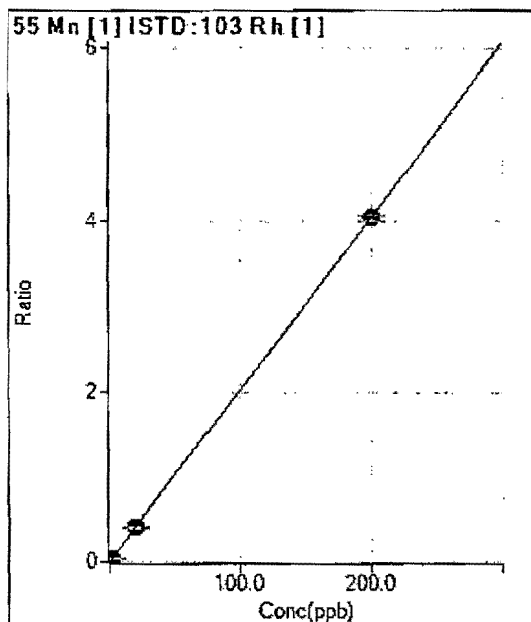
Calibration Title:

Calibration Method: External Calibration

VIS Interpolation Fit:

Tune Step: #1 hehe.u

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.D	blank	10/12/2011 12:06:15 PM
2	004CALS.D	H/1000	10/12/2011 12:08:37 PM
3	005CALS.D	H/100	10/12/2011 12:10:57 PM
4	006CALS.D	H/10	10/12/2011 12:13:17 PM
5	007CALS.D	HIGH	10/12/2011 12:15:38 PM
6			



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	Γ	0.000	0.000	66.67	0.0009	P	55.2
2	Γ	0.200	0.266	478.35	0.0063	P	3.1
3	Γ	2.000	2.009	3378.76	0.0415	P	5.9
4	Γ	20.000	19.656	33499.78	0.3976	P	2.3
5	Γ	200.000	200.034	336032.60	4.0377	P	1.5
6	Γ	40.000					

$$y = 0.0202 * x + 9.3174E-004$$

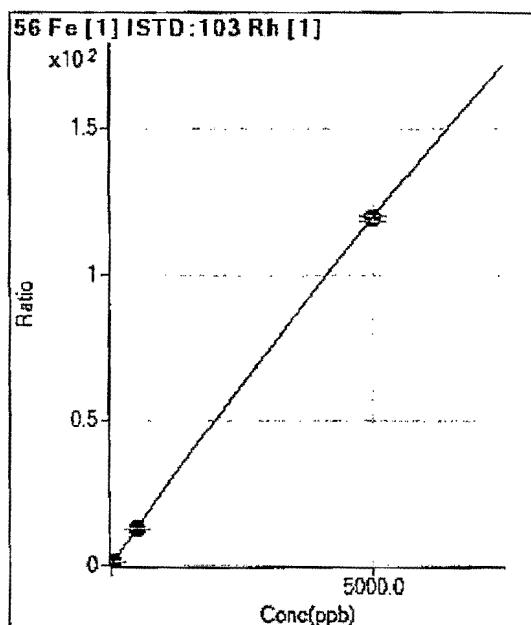
$$R = 1.0000$$

$$DL = 0.07647$$

$$BEC = 0.04617$$

Weight: None

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	Γ	0.000	0.611	1123.41	0.0157	P	10.5
2	Γ	5.000	9.518	18574.47	0.2447	P	3.7
3	Γ	50.000	54.386	113715.50	1.3971	P	1.6
4	Γ	500.000	499.460	1074414.67	12.7487	P	1.6
5	Γ	5000.000	5000.006	9929979.44	119.3149	A	1.2
6	Γ	1000.000					

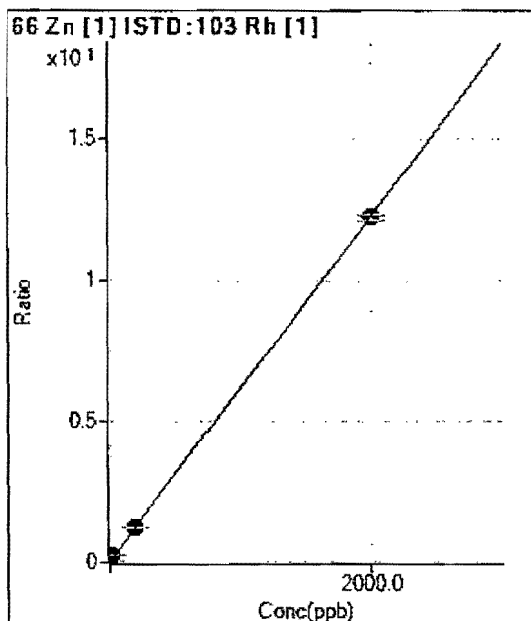
$$y = -3.6928E-007 * x^2 + 0.0257 * x$$

$$DL = 0.1921$$

$$BEC = 0$$

Weight: None

Min Conc: <None>



	R <sub>1</sub>	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	Γ	0.000	0.000	96.67	0.0014	P	35.8
2	Γ	2.000	11.385	5397.79	0.0711	P	4.0
3	Γ	20.000	41.208	20660.62	0.2539	P	2.7
4	Γ	200.000	205.192	106102.84	1.2588	P	0.7
5	Γ	2000.000	1999.259	1019741.83	12.2534	P	1.5
6	Γ	400.000					

$$y = 0.0061 * x + 0.0014$$

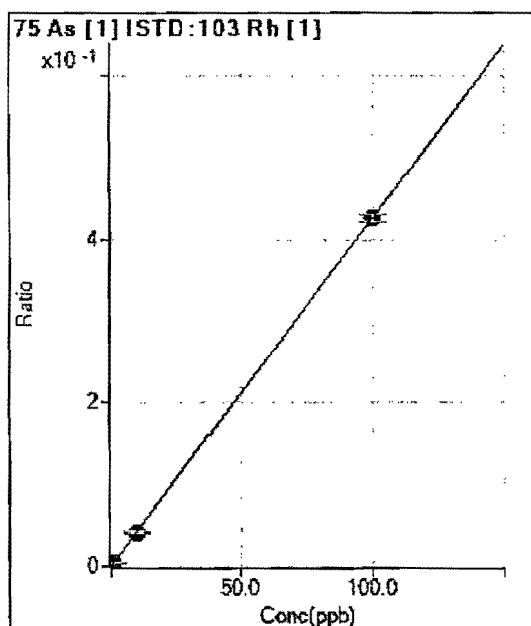
$$R = 1.0000$$

$$DL = 0.237$$

$$BEC = 0.2208$$

Weight: None

Min Conc: <None>



	R <sub>1</sub>	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	Γ	0.000	0.000	6.00	0.0001	P	17.0
2	Γ	0.100	0.108	41.33	0.0005	P	14.2
3	Γ	1.000	1.001	353.68	0.0043	P	3.6
4	Γ	10.000	9.729	3494.39	0.0415	P	2.7
5	Γ	100.000	100.027	35429.32	0.4258	P	2.1
6	Γ	20.000					

$$y = 0.0043 * x + 8.4039E-005$$

$$R = 1.0000$$

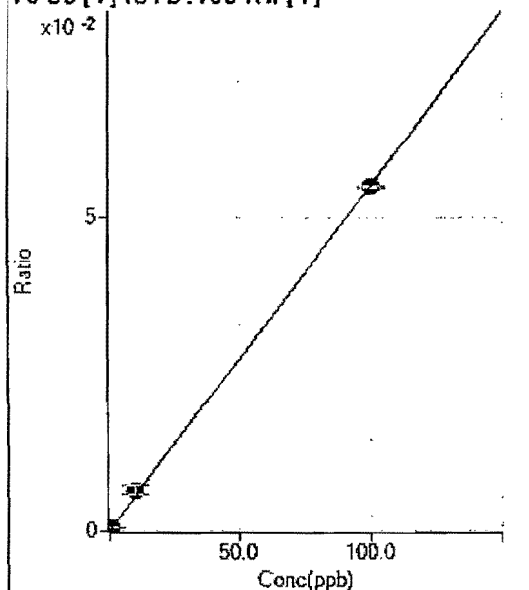
$$DL = 0.01005$$

$$BEC = 0.01975$$

Weight: None

Min Conc: <None>

78 Se [1] ISTD:103 Rh [1]



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	0.53	0.0000	P	112.9
2	<input type="checkbox"/>	0.100	0.096	4.53	0.0001	P	25.1
3	<input type="checkbox"/>	1.000	1.125	51.07	0.0006	P	19.3
4	<input type="checkbox"/>	10.000	11.800	548.59	0.0065	P	22.4
5	<input type="checkbox"/>	100.000	99.819	4568.51	0.0549	P	0.8
6	<input type="checkbox"/>	20.000					

$$y = 5.4982\text{E-}004 * x + 7.4208\text{E-}006$$

$$R = 0.9998$$

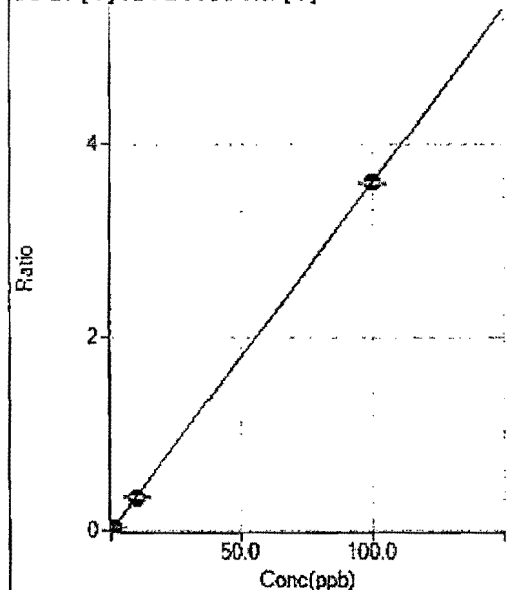
$$DL = 0.04573$$

$$BEC = 0.0135$$

Weight: None

Min Conc: &lt;None&gt;

88 Sr [1] ISTD:103 Rh [1]



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	46.67	0.0007	P	33.1
2	<input type="checkbox"/>	0.100	0.140	430.03	0.0057	P	29.6
3	<input type="checkbox"/>	1.000	0.973	2903.73	0.0357	P	4.4
4	<input type="checkbox"/>	10.000	9.779	29692.03	0.3525	P	2.6
5	<input type="checkbox"/>	100.000	100.022	299603.82	3.5995	P	0.6
6	<input type="checkbox"/>	20.000					

$$y = 0.0360 * x + 6.5452\text{E-}004$$

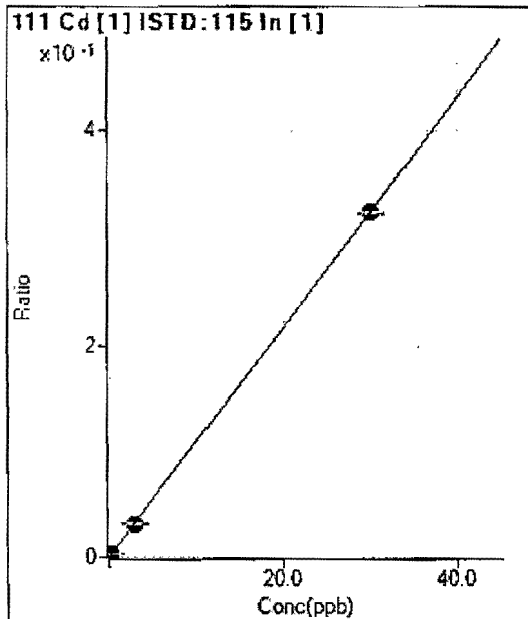
$$R = 1.0000$$

$$DL = 0.01808$$

$$BEC = 0.01819$$

Weight: None

Min Conc: &lt;None&gt;



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	0.67	0.0000	P	173.2
2	<input type="checkbox"/>	0.030	0.064	50.64	0.0007	P	35.1
3	<input type="checkbox"/>	0.300	0.295	244.40	0.0032	P	10.9
4	<input type="checkbox"/>	3.000	2.928	2534.77	0.0317	P	4.1
5	<input type="checkbox"/>	30.000	30.007	25997.79	0.3243	P	0.5
6	<input type="checkbox"/>	6.000					

$$y = 0.0108 * x + 9.6732E-006$$

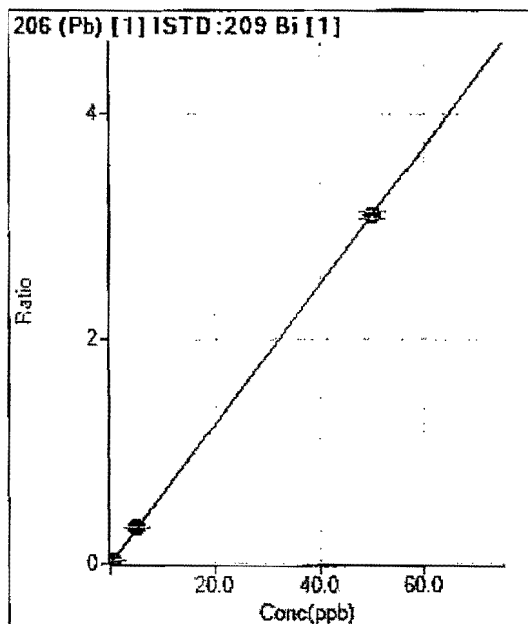
$$R = 1.0000$$

$$DL = 0.004651$$

$$BEC = 0.0008951$$

Weight: None

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	<input type="checkbox"/>	0.000	0.000	63.34	0.0014	P	61.8
2	<input type="checkbox"/>	0.050	0.072	286.69	0.0059	P	11.4
3	<input type="checkbox"/>	0.500	0.510	1650.18	0.0329	P	6.5
4	<input type="checkbox"/>	5.000	5.227	17160.89	0.3241	P	2.0
5	<input type="checkbox"/>	50.000	49.977	166938.58	3.0868	P	2.3
6	<input type="checkbox"/>	10.000					

$$y = 0.0617 * x + 0.0014$$

$$R = 1.0000$$

$$DL = 0.04179$$

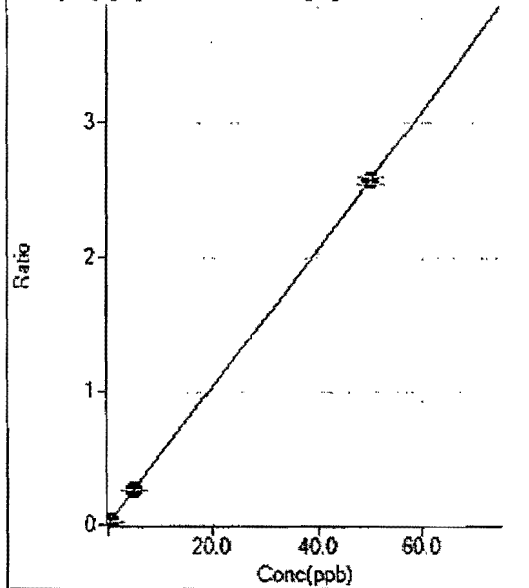
$$BEC = 0.02255$$

Weight: None

Min Conc: <None>



207 (Pb) [1] ISTD:209 Bi [1]



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0017	P	28.7
2	☐	0.050	0.049	206.68	0.0042	P	46.1
3	☐	0.500	0.530	1453.49	0.0289	P	7.2
4	☐	5.000	5.094	13923.89	0.2632	P	1.3
5	☐	50.000	49.990	138879.34	2.5674	P	2.0
6	☐	10.000					

$$y = 0.0513 * x + 0.0017$$

$$R = 1.0000$$

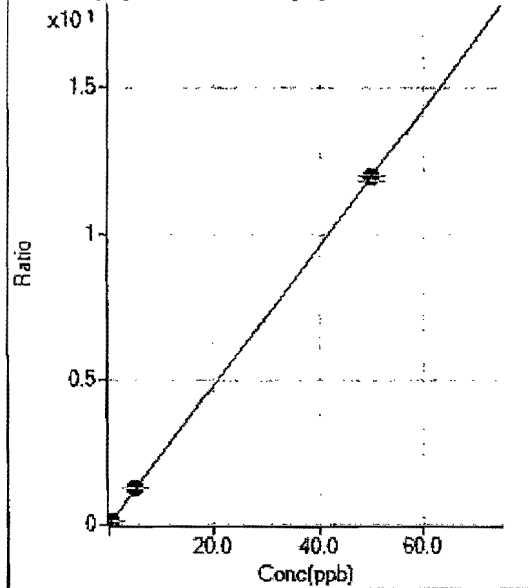
$$DL = 0.02862$$

$$BEC = 0.03319$$

Weight: None

Min Conc: &lt;None&gt;

208 Pb [1] ISTD:209 Bi [1]



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	300.02	0.0067	P	16.7
2	☐	0.050	0.054	956.73	0.0195	P	6.3
3	☐	0.500	0.537	6754.30	0.1344	P	5.9
4	☐	5.000	5.216	66074.57	1.2483	P	1.0
5	☐	50.000	49.978	643891.65	11.9046	P	1.9
6	☐	10.000					

$$y = 0.2381 * x + 0.0067$$

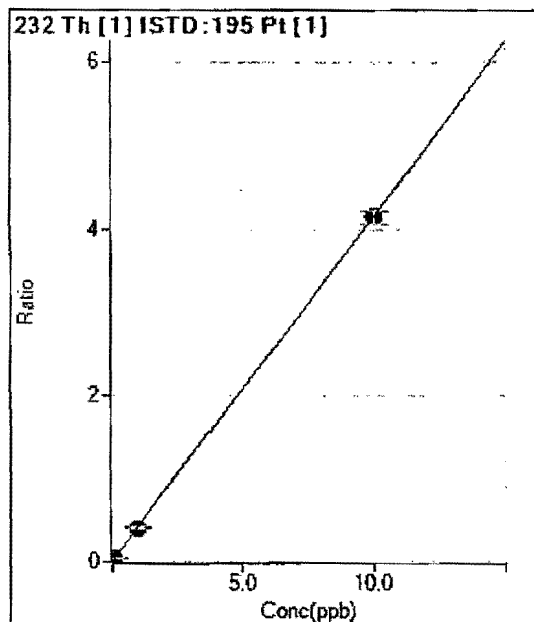
$$R = 1.0000$$

$$DL = 0.01405$$

$$BEC = 0.02797$$

Weight: None

Min Conc: &lt;None&gt;



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0009	P	77.5
2	☐	0.010	0.010	160.01	0.0052	P	11.3
3	☐	0.100	0.087	1180.11	0.0372	P	3.6
4	☐	1.000	0.979	13710.49	0.4074	P	1.5
5	☐	10.000	10.002	140527.80	4.1553	P	3.5
6	☐	2.000					

$$y = 0.4153 * x + 9.2140E-004$$

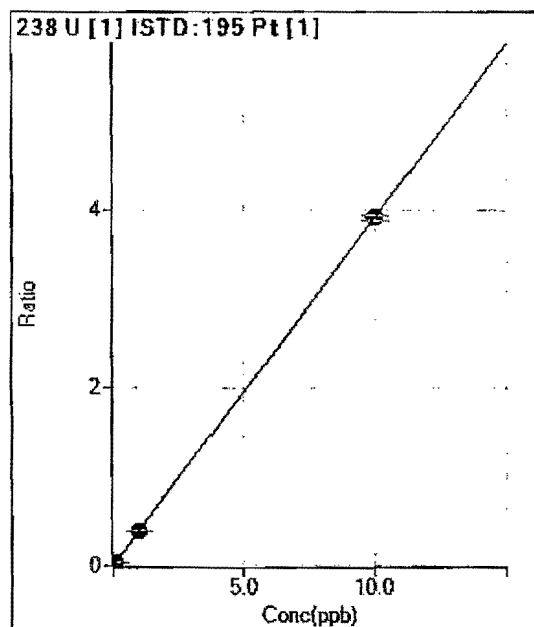
$$R = 1.0000$$

$$DL = 0.005155$$

$$BEC = 0.002218$$

Weight: None

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0013	P	41.6
2	☐	0.010	0.008	130.00	0.0042	P	5.0
3	☐	0.100	0.095	1216.74	0.0383	P	7.5
4	☐	1.000	1.002	13178.33	0.3923	P	3.5
5	☐	10.000	10.000	132048.19	3.9027	P	1.9
6	☐	2.000					

$$y = 0.3902 * x + 0.0013$$

$$R = 1.0000$$

$$DL = 0.004077$$

$$BEC = 0.003266$$

Weight: None

Min Conc: <None>

## Header Information for Analytical Run: Hg111010-1

Analyst: Sheri Lafferty

---

### Standards:

Stock A: 10ppm (ST110725-1)

Stock B: 10ppm (ST110725-2)

Daily standards made by diluting stock solution 100X

### Reagents:

See digestion log

### Pipettes Used:

M-57 ----- 0.01mL to 0.1mL

M-61 ----- 0.1mL to 1.0mL

M-1010---1.0mL to 5.0mL

### Method of Dilution:

2X-----Dilution made by diluting 5.0ml of sample to 10ml final volume.

5X-----Dilution made by diluting 2.0ml of sample to 10ml final volume

10X-----Dilution made by diluting 1.0ml of sample to 10ml final volume

20X-----Dilution made by diluting 0.5ml of sample to 10ml final volume

50X-----Dilution made by diluting 0.2ml of sample to 10ml final volume

100X---Dilution made by diluting 0.1ml of sample to 10ml final volume

500X---Dilution made by diluting a 5X dilution 100X

1000X-Dilution made by diluting a 10X dilution 100X

### Daily Maintenance:

1. Check/ Change peristaltic pump tubing
2. Check gas liquid separator for deposits, clean if necessary
3. Check/ Refill rinse water & stannous chloride reservoirs

Daily Maintenance done by: SL

### Monthly Maintenance:

1. Check/ Clean sample and reference cells
2. Check/ Change Nafion cartridge

Monthly Maintenance done by: SL 9/21/2011

# Report Generated By CETAC QuickTrace

Analyst: sheri.lafferty

Worksheet file: C:\Program Files\QuickTrace\Worksheets\HG111010-1.wsz

Date Started: 10/10/2011 1:22:57 PM

Comment:

## Results

Sample Name	Type	Date/Time	Conc (ppb)	%RSD	Flags
Calibration Blank	STD	10/10/11 02:21:15 pm	0.00000	4.52	
Replicates			49.6 49.9 53.4 48.0		
Standard #1 (0.20 ppb)	STD	10/10/11 02:23:23 pm	0.20000	0.22	
Replicates			4565.4 4576.0 4581.4 4589.1		
Standard #2 (0.50 ppb)	STD	10/10/11 02:25:32 pm	0.50000	0.22	
Replicates			10587.9 10618.2 10637.2 10639.3		
Standard #3 (1.0 ppb)	STD	10/10/11 02:27:40 pm	1.00000	0.22	
Replicates			22682.5 22745.2 22782.1 22796.3		
Standard #4 (2.0 ppb)	STD	10/10/11 02:29:50 pm	2.00000	0.35	
Replicates			45982.5 46144.2 46269.1 46349.0		
Standard #5 (5.0 ppb)	STD	10/10/11 02:32:00 pm	5.00000	0.21	
Replicates			111795.8 112036.0 112204.4 112339.5		
Standard #6 (10.0 ppb)	STD	10/10/11 02:34:11 pm	10.00000	0.22	
Replicates			223878.8 224400.3 224774.0 225009.6		

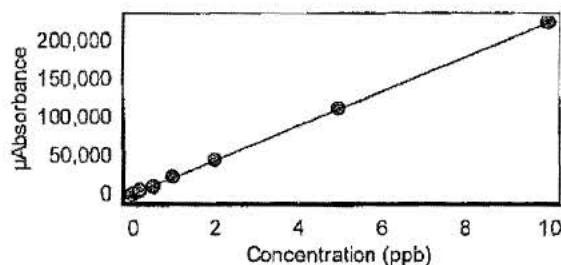
### Calibration

Equation:  $A = 161.953 + 22441.840C$

R2: 0.99995

SEE: 632.8431

Flags:



ICV	ICV	10/10/11 02:36:22 pm	1.05000	0.19
Replicates			23640.3 23687.8 23719.0 23742.1	
% Recovery			104.87	

Sample Name				Type	Date/Time	Conc (ppb)	%RSD	Flags
ICB				ICB	10/10/11 02:38:33 pm	-0.00637	13.59	
Replicates	21.9	15.8	18.1	19.8				
CRA				UNK	10/10/11 02:40:41 pm	0.19400	0.32	
Replicates	4499.6	4514.1	4525.5	4533.0				
HG111010-1MB				UNK	10/10/11 02:42:48 pm	-0.00576	7.30	
Replicates	31.2	30.5	33.1	35.8				
HG111010-1LCS				UNK	10/10/11 02:44:56 pm	0.99500	0.21	
Replicates	22426.2	22481.5	22523.1	22530.4				
HG111010-2MB				UNK	10/10/11 02:47:04 pm	-0.00636	20.89	
Replicates	21.2	20.8	21.7	13.2				
HG111010-2LCS				UNK	10/10/11 02:49:12 pm	0.99400	0.25	
Replicates	22398.1	22456.7	22501.4	22524.0				
1109362-1				UNK	10/10/11 02:51:21 pm	0.08050	0.32	
Replicates	1960.7	1964.4	1971.2	1974.3				
1109362-1D				UNK	10/10/11 02:53:30 pm	0.07630	0.24	
Replicates	1868.8	1872.4	1875.0	1879.3				
1109362-1L 5X				UNK	10/10/11 02:55:39 pm	0.01180	0.43	
Replicates	427.8	429.3	427.2	424.9				
1109362-1MS				UNK	10/10/11 02:57:48 pm	2.11000	0.37	
Replicates	47367.1	47485.2	47624.1	47771.8				
1109362-1MSD				UNK	10/10/11 02:59:58 pm	2.13000	0.18	
Replicates	47891.6	47976.7	48043.1	48088.9				
CCV				UNK	10/10/11 03:02:08 pm	2.05000	0.13	
Replicates	46059.8	46107.6	46156.1	46196.2				

Sample Name				Type	Date/Time	Conc (ppb)	%RSD	Flags
CCB				UNK	10/10/11 03:04:18 pm	-0.00770	20.58	
Replicates	-9.9	-9.3	-10.0	-14.1				
1109362-2				UNK	10/10/11 03:06:25 pm	0.06730	0.62	
Replicates	1659.5	1670.8	1677.4	1683.7				
1109362-3				UNK	10/10/11 03:08:33 pm	0.06890	0.42	
Replicates	1697.6	1706.7	1714.3	1710.5				
1109362-4				UNK	10/10/11 03:10:40 pm	0.06130	0.22	
Replicates	1532.6	1535.5	1538.0	1540.2				
1109362-5				UNK	10/10/11 03:12:48 pm	0.04340	0.18	
Replicates	1134.4	1134.1	1134.9	1138.5				
1109362-6				UNK	10/10/11 03:14:56 pm	0.08240	0.18	
Replicates	2007.1	2010.4	2014.8	2014.0				
1109362-7				UNK	10/10/11 03:17:04 pm	0.07660	0.37	
Replicates	1871.6	1878.2	1883.2	1887.9				
1109362-8				UNK	10/10/11 03:19:13 pm	0.03430	0.36	
Replicates	927.3	931.7	934.2	934.6				
1109362-9				UNK	10/10/11 03:21:22 pm	0.04790	0.21	
Replicates	1238.1	1237.3	1239.9	1233.8				
1109362-10				UNK	10/10/11 03:23:31 pm	0.05760	0.12	
Replicates	1452.2	1453.6	1455.7	1455.8				
1109362-11				UNK	10/10/11 03:25:40 pm	0.03360	0.18	
Replicates	914.8	913.8	917.6	914.7				
CCV				UNK	10/10/11 03:27:50 pm	2.05000	0.27	
Replicates	46078.7	46096.0	46143.8	46349.7				

Sample Name				Type	Date/Time	Conc (ppb)	%RSD	Flags
CCB				UNK	10/10/11 03:30:00 pm	-0.00501	5.42	
Replicates	49.2	47.7	47.8	53.4				
1109362-12				UNK	10/10/11 03:32:07 pm	0.03820	0.51	
Replicates	1012.1	1017.3	1019.0	1024.6				
1109362-13				UNK	10/10/11 03:34:14 pm	0.04160	0.22	
Replicates	1092.7	1095.1	1094.1	1098.5				
1109362-14				UNK	10/10/11 03:36:21 pm	0.07060	0.83	
Replicates	1727.8	1744.0	1753.9	1761.0				
1109363-1				UNK	10/10/11 03:38:29 pm	0.26600	0.32	
Replicates	6102.0	6118.8	6133.2	6148.5				
1109363-1D				UNK	10/10/11 03:40:37 pm	0.25300	0.29	
Replicates	5822.3	5840.0	5855.5	5860.4				
1109363-1MS				UNK	10/10/11 03:43:12 pm	2.21000	0.46	
Replicates	49469.3	49786.7	49917.7	49961.2				
1109363-1MSD				UNK	10/10/11 03:45:21 pm	2.24000	0.27	
Replicates	50396.1	50320.3	50414.0	50637.3				
1109363-2				UNK	10/10/11 03:47:30 pm	0.05590	0.14	
Replicates	1416.6	1414.8	1418.8	1414.2				
1109363-3				UNK	10/10/11 03:49:39 pm	0.05270	0.13	
Replicates	1343.0	1346.9	1346.0	1345.8				
1109363-4				UNK	10/10/11 03:51:48 pm	0.06890	0.22	
Replicates	1713.7	1708.1	1705.2	1706.4				
CCV				UNK	10/10/11 03:53:58 pm	2.06000	0.03	
Replicates	46324.3	46315.9	46300.9	46296.5				

Sample Name				Type	Date/Time	Conc (ppb)	%RSD	Flags
CCB				UNK	10/10/11 03:56:08 pm	-0.00714	74.40	
Replicates	2.0	-0.1	2.1	2.6				
1109363-5				UNK	10/10/11 03:58:15 pm	0.06240	0.27	
Replicates	1557.0	1562.5	1567.2	1561.2				
1109363-6				UNK	10/10/11 04:00:23 pm	0.05910	0.30	
Replicates	1481.1	1488.4	1489.6	1491.4				
1109363-7				UNK	10/10/11 04:10:15 pm	0.08360	0.13	
Replicates	2036.6	2037.2	2041.1	2041.5				
1109363-8				UNK	10/10/11 04:12:23 pm	0.06990	0.23	
Replicates	1725.6	1732.5	1731.9	1734.7				
1109363-9				UNK	10/10/11 04:14:30 pm	0.08400	0.23	
Replicates	2052.6	2050.3	2046.0	2041.9				
1109363-10				UNK	10/10/11 04:16:38 pm	0.05630	0.14	
Replicates	1428.8	1427.2	1424.4	1425.3				
1109363-11				UNK	10/10/11 04:18:47 pm	0.05240	0.31	
Replicates	1333.4	1338.0	1343.1	1340.9				
1109363-12				UNK	10/10/11 04:20:55 pm	0.56600	0.22	
Replicates	12833.8	12859.2	12880.5	12901.3				
1110077-4				UNK	10/10/11 04:23:04 pm	0.19900	0.20	
Replicates	4617.5	4625.3	4633.4	4638.6				
1110077-5				UNK	10/10/11 04:25:13 pm	0.35200	0.07	
Replicates	8050.4	8055.9	8063.5	8059.8				
CCV				UNK	10/10/11 04:27:23 pm	2.04000	0.15	
Replicates	45876.8	45983.5	46016.1	46027.6				



Sample Name				Type	Date/Time	Conc (ppb)	%RSD	Flags
CCB				UNK	10/10/11 04:29:33 pm	-0.00825	10.07	
Replicates	-22.9	-26.4	-22.9	-20.8				
1109363-1L 5X				UNK	10/10/11 04:31:40 pm	0.04790	0.09	
Replicates	1236.5	1235.9	1236.1	1238.3				
CRA				UNK	10/10/11 04:33:48 pm	0.19500	0.48	
Replicates	4499.1	4528.6	4540.5	4548.5				
CCV				UNK	10/10/11 04:35:55 pm	2.04000	0.05	
Replicates	45886.9	45855.4	45834.6	45833.6				
CCB				UNK	10/10/11 04:38:03 pm	-0.00845	16.92	
Replicates	-21.4	-26.9	-30.6	-31.8				



## Miscellaneous

# METALS DIGESTION WORKSHEET

ALS Laboratory Group

Digestion Date 10.7.11  
 Digestion Batch IP11007-4  
 Temp 95 °C

HCl Lot No. K14054  
 HNO<sub>3</sub> Lot No. K19023  
 Peroxide Lot No. H12304

Method: 3050  
 SOP/Rev: 806 R15  
 Balance(s): 32

Beaker Lot No. 1812/20  
 Avg. Beaker Wt. (g) 20.5  
 Pipet(s): M-30  
 Initial Prep BDS Final Prep BDS  
 Prep Start Time 1300 Prep End Time 1700  
 Digestate Wt. (g) 105.11

Form 806r20.xls (02/10/11)

Note: Each Page is copied as completed and included with the workorder/run documentation; reviewed subsequently

QC Grp	Lab Sample ID	Instrument	Int Vol/Wt (mL/g)	Final Vol. (mL)	Final Wt. (g)	pH	Comments, including metals list
	1109301-1	TX	See	100.0	125.6	NH	-TX: 25 targets
	-1D		Lims				
	-1MS						
	-1MSD						
	1109308-2/	MS					-MS: Th, U
	1109363-1	TX/MS					-MS: U
	-1D						-TX: 24 targets
	-1MS						
	-1MSD						
	-2						0018-MS: LA, Mg, Na, Se
	-3						
	-4						
	-5						
	-6						
	-7						
	-8						
	-9						
	-10						
	-11						
	-12						
	1110018-1	MS				QC Grp	Lab Sample ID
	-2						Int Vol/Wt (mL/g)
	-3						Final Vol. (mL)
	-4						Final Wt. (g)
	-5						Spiking Information
	IP11007-4 MB	TX/MS					QC
	-4CCS						Amount
	-4RVS						ST110927-2
	EM11007-4 CCS						1mL RVS
	-4RVS						ST110608-1
							1mL MS
							ST110103-9
							1mL RVS
							ST110902-2
							1mL C
							ST110902-3
							2mL Cat
							ST110916-7
							2mL Z

411257

## MERCURY DIGESTION - SOIL

Method 7471 SOP 812/Rev 5 Date Analyzed 10-10-11 File HG111010-1 \*\*\* Init. AS (prep.) AS (analysis)  
 Digestion Date 10-10-11 Spike Witness N/A Time Start 1205 Time Finish 1235 Bath Temp 95°C

Tube #	Solution ID	Spike * Solution	Spike Volume (mL)	Sample **** Aliquot (g)	Final ** Volume (mL)	Comments
STD 1	0 ppb	-	-	-	100.0	
2	0.2 ppb	A	0.2	-	100.0	
3	0.5 ppb	A	0.5	-	100.0	
4	1.0 ppb	A	1.0	-	100.0	
5	2.0 ppb	A	2.0	-	100.0	
6	5.0 ppb	A	5.0	-	100.0	
7	10.0 ppb	A	10.0	-	100.0	
	ICV	B	1.0	-	100.0	
	ICB	-	-	-	100.0	
	CRA-0.2 ppb	A	0.2	-	100.0	
SAMPLES -- Prep. Batch ID(s) <u>HG111010-1</u> (see LIMS Prep. Batch report for sample info. (IDs, Aliquots, etc.))						
	CCVs	A	2.0	-	100.0	<u>3</u> # prepared
	CCBs	-	-	-	100.0	<u>3</u> # prepared

\*\*\*\* Automated balance entry into LIMS.

\*\*\* See run report for run log information.

\*\* Laboratory DI water used to make-up to final volume.

\*A: 100 ppb Hg solution made from 100x dilution (1 mL/100 mL) of ST110725-1 ID

\*B: 100 ppb Hg solution made from 100x dilution (1 mL/100 mL) of ST110725-2 ID (2nd source)

See run header for maintenance performed.

Digestion Cups: 1105331

Reagents: HNO<sub>3</sub> K14037 HCl K14057 SnCl<sub>4</sub> R6110909-1 KMnO<sub>4</sub> R6110909-2 Hydroxylamine R6110915-1

Balance(s) Used: 29

Pipet(s) Used: MS7 M61 M1010

Note: Each page is copied as completed and included with the workorder/run documentation; reviewed subsequently

# Percent Moisture

## Method SOP642 Revision 9

**Lab Name: ALS Environmental -- FC**

Date Extracted: 10/12/2011	Balance ID: 31	Validated By: bac
Date Analyzed: 10/12/2011	Oven ID: 17	Validation Date: 10/12/2011
Analyst: Binash A. Chaudhry	In Oven: 10/11/2011 11:11	Validation Time: 8:47:37 AM
	Out of Oven: 10/12/2011 8:33	

Run ID	Prep Batch ID	QC Batch ID	Lab ID	QC Type	Dish Wt	Wet Wt	Dry Wt	Dry Wt-Dish Wt	Percent Moisture	Percent Solids	RPD
EX111011-2A	EX111011-2	EX111011-2-1	1109363-1	DUP	1.298	10.18	10.94	9.64	5.3	94.7	1
EX111011-2A	EX111011-2	EX111011-2-1	1109363-1	SMP	1.301	10.17	10.93	9.63	5.3	94.7	
EX111011-2A	EX111011-2	EX111011-2-2	1109363-1	SMP	1.301	10.17	10.93	9.63	5.3	94.7	
EX111011-2A	EX111011-2	EX111011-2-1	EX111011-2	MB	1.293	1.294	1.293	0.00	100.0	0.0	
EX111011-3A	EX111011-3	EX111011-3-1	1109363-10	SMP	1.297	10.4	11.59	10.29	1.0	99.0	
EX111011-3A	EX111011-3	EX111011-3-1	1109363-11	SMP	1.306	10.58	11.81	10.50	0.7	99.3	
EX111011-3A	EX111011-3	EX111011-3-2	1109363-12	SMP	1.296	10.12	11.01	9.72	4.0	96.0	
EX111011-3A	EX111011-3	EX111011-3-1	1109363-2	SMP	1.29	10.73	11.93	10.64	0.9	99.1	
EX111011-3A	EX111011-3	EX111011-3-1	1109363-3	SMP	1.286	10.18	11.38	10.09	0.9	99.1	
EX111011-3A	EX111011-3	EX111011-3-1	1109363-4	SMP	1.289	10.41	11.58	10.29	1.1	98.9	
EX111011-3A	EX111011-3	EX111011-3-2	1109363-5	DUP	1.29	10.5	11.66	10.37	1.2	98.8	13
EX111011-3A	EX111011-3	EX111011-3-1	1109363-5	SMP	1.306	10.59	11.79	10.48	1.1	98.9	
EX111011-3A	EX111011-3	EX111011-3-2	1109363-5	SMP	1.306	10.59	11.79	10.48	1.1	98.9	
EX111011-3A	EX111011-3	EX111011-3-1	1109363-6	SMP	1.302	10.57	11.77	10.47	1.0	99.0	
EX111011-3A	EX111011-3	EX111011-3-1	1109363-7	SMP	1.288	10.18	11.33	10.04	1.3	98.7	
EX111011-3A	EX111011-3	EX111011-3-1	1109363-8	SMP	1.3	10.61	11.79	10.49	1.1	98.9	
EX111011-3A	EX111011-3	EX111011-3-1	1109363-9	SMP	1.303	10.21	11.36	10.05	1.5	98.5	
EX111011-3A	EX111011-3	EX111011-3-2	EX111011-3	MB	1.283	1.284	1.284	0.00	99.9	0.1	

### QC Types

CAR	Carrier reference sample
LCS	Laboratory Control Sample
MB	Method Blank
MSD	Laboratory Matrix Spike Duplicate
RVS	Reporting Level Verification Standar
SYS	Sample Yield Spike

DUP	Laboratory Duplicate
LCSD	Laboratory Control Sample Duplicat
MS	Laboratory Matrix Spike
REP	Sample replicate
SMP	Field Sample

### Comments:

DUP = Sample Duplicate  
Wet Wt = Sample Wet Wt - Dish Wt  
Dry Wt = Sample Dry Wt + Dish Wt  
Dry Wt - Dish Wt = Sample Dry Wt - Dish Wt  
All weight values shown above are expressed in grams.

$$RPD = \frac{(\text{Sample Value} - \text{Duplicate Value})}{2} \times 100$$

$$\% \text{ Solids} = \frac{\text{Dry Weight}}{\text{Wet Weight}} \times 100$$

$$\% \text{ Moisture} = \frac{(\text{Wet Weight} - \text{Dry Weight})}{\text{Wet Weight}} \times 100$$

## **APPENDIX E**

### **LABORATORY DATA VALIDATION**

## **Review of John Bully site analytical data (Eberline Analytical Data Package 11-09167)**

### **Data Validation**

The subject data package was reviewed and the data appear valid.

The data package contained analytical results for 13 soil samples including one lab duplicate. The lab blanks and spikes for the data package were within tolerances, and MDA's for all results were acceptable. The data package indicated a minimum 21 day holding time to allow for the ingrowth of radon daughters, and analytical results were reported for daughters of U-238 (Ra-226), Th-232, and K-40.

### **Data Description**

The data package contained seven samples from the mine site including one field duplicate, one sample from the nearby arroyo (AR-01-31), and one sample from the Voight Tank (VTP-01-31).

The data package also contained samples from three background locations; east, south, and west. Background concentrations for Ra-226, U-238, and Th-232 in all three samples appeared to be similar to that expected for background concentrations in this area. The average Ra-226 concentration was 1.7 pCi/g, and the standard deviation of these three results was 0.3 pCi/g. Three times the average concentration is then 5.1 pCi/g. The average concentration plus 2 standard deviation is then 2.3 pCi/g. Therefore, the criteria to which the site samples will be compared is the lessor of these values or 2.3 pCi/g.

### **Data Interpretation**

Ra-226 concentrations in samples collected from the John Bully site ranged from 2.3 to 28 pCi/g, and therefore all equaled or exceeded the criteria. U-238 concentrations in all samples appeared to be at concentrations indicative of uranium ore, and not tailings.

The Ra-226 concentration in the sample collected from the arroyo was 752 pCi/g, which significantly exceeds the criteria. The U-238 concentration in this sample was also indicative of uranium ore.

The Ra-226 concentration in the sample collected from the Voight Tank was 207 pCi/g, which again significantly exceeds the criteria. However, the U-238 concentration in this sample was 21 pCi/g, which is indicative of severe disequilibrium with the Ra-226. This may be representative of tailings.

Th-232 in all samples was at concentrations indicative of normal background levels.

Note that Ra-226 concentrations are based on laboratory analytical results for Bi-214, U-234 concentrations are based on analytical results for Th-234, and Th-232 concentrations are based on analytical results for Ac-228.

### **Conclusion**

Based on gamma isotopic analytical results of Ra-226, it can be concluded that an Observed Release was identified on the John Bully site. There is no apparent need to perform alpha spectrometry analyses on these samples.

## DATA QUALITY ASSURANCE REVIEW

SITE NAME John Bully Uranium Mine

WORK ORDER NUMBER 20406.012.035.0645.01 TDD NUMBER TO-0035-11-06-03

PROJECT NUMBER \_\_\_\_\_ SDG NUMBER 1109363

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20406.012.035.0645.01, SDG No. 1109363, John Bully Uranium Mine. Twelve samples were analyzed for metals by ALS Environmental. Sample numbers are listed below.

### SAMPLE NUMBERS

<u>AR-01-31-110928</u>	<u>JB-11-31-110928</u>	<u>JB-30-31-110928</u>
<u>JB-41-31-110928</u>	<u>JB-41-32-110928</u>	<u>JB-48-31-110928</u>
<u>JB-67-31-110928</u>	<u>JB-68-31-110928</u>	<u>JBBKGD-E-31-110928</u>
<u>JBBKGD-S-31-110928</u>	<u>JBBKGD-W-31-110928</u>	<u>VTP-01-31-110928</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

This data package was validated to determine if Quality Control (QC) specifications were achieved, following *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (October, 1999), *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (July, 2002), *USEPA Contract Laboratory Program National Functional Guidelines for Chlorinated Dioxin/Furan Data Review* (August, 2002), *Quality Assurance/Quality Control Guidance for Removal Activities* (April, 1990), and the Regional Protocol for Holding Times, Blanks, and VOA Preservation (April 13, 1989). Specific data qualifications are listed in the following discussion.

REVIEWER Gloria J. Switalski DATE November 18, 2011



## Data Qualifiers

Data Qualifier Definitions were supplied by the Office of Solid Waste and Emergency Response (September 1989) and are included in the Functional Guidelines. Data qualifiers may be combined (UJ, QJ) with the corresponding combination of meanings. Additional qualifier may be added to provide additional, more specific information (JL, UB, QJK), modifying the meaning of the primary qualifier. Addition qualifiers utilized by WESTON are H, L, K, B, Q, and D.

- U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation or detection limit, which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution or other analysis specific parameters.

An additional qualifier, "B", may be appended to indicate that while the analyte was detected in the sample, the presence of the analyte may be attributable to blank contamination and the analyte is therefore considered undetected with the sample detection or quantitation limit for the analyte being elevated.

- J - The analyte was analyzed for, but the associated numerical value may not be consistent with the amount actually present in the environmental sample or may not be consistent with the sample detection or quantitation limit. The value is an estimated quantity. The data should be seriously considered for decision-making and are usable for many purposes.

An additional qualifier will be appended to the "J" qualifier that indicates the bias in the reported results:

L Low bias

H High bias

K Unknown bias

Q The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

The L and H qualifier will only be employed when a single qualification is required. When more than one quality control parameter affects the analytical result and a conflict results in assigning a bias, the result will be flagged JK.

- R - Quality Control indicates that data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary for verification to confirm or deny the presence of an analyte.
- N - The analysis indicates the presence of analyte for which there is presumptive evidence to make a "tentative identification."
- D - The concentration reported was determined in the re-analysis of the sample at a secondary dilution.

## METALS DATA EVALUATION

### 1. Analytical Method:

Samples were prepared and analyzed for ICP metals using the procedures specified in **SW-846 Methods 6010B and 6020A**. Samples were prepared and analyzed for mercury using the procedures specified in **SW-846 Method 7471A**.

### 2. Holding Times:

All samples met established holding time criteria of 180 days for ICP metals and 28 days for mercury. Samples were received at 1.8°C which is slightly below 4°C±2°C, but they were not frozen. No qualifications are placed on the data.

### 3. Initial Calibration:

ICP initial calibration included a blank and one standard and initial calibration verification results fell within the control limits of 90 to 110 percent of the true values. Mercury initial calibration included a blank and six standards and the correlation coefficient was greater than 0.995. No qualifications are placed on the data.

### 4. Continuing Calibration:

All ICP results fell within the control limits of 90% to 110% of the true values. All mercury results fell within the control limits of 80% to 120% of the true values. No qualifications are placed on the data.

### 5. CRDL Standard:

All results for the CRDL standard were within the control limits of 70% to 130% of the true values or the sample results were greater than the CRDL action level. No qualifications are placed on the data.

### 6. Blanks:

#### A. Laboratory Blanks:

No target analytes were detected in the calibration and preparation blanks at concentrations that warrant blank action. No qualifications are placed on the data.

#### B. Field Blanks:

No field blank samples were submitted with this analytical package. No qualifications are placed on the data.

### 7. ICP Interference Check:

All results for the Interference Check Sample were within the control limits of 80% to 120% of the true values. No qualifications are placed on the data.

#### 8. Laboratory Control Sample (LCS):

The recoveries for the LCS were within the established control limits. No qualifications are placed on the data.

#### 9. Duplicate Sample Analysis:

##### A. Laboratory Duplicate Analysis:

Sample AR-01-31-110928 underwent duplicate analysis for the soil matrix. QC criteria are that the Relative Percent Difference (RPD) values for the duplicate sample analysis be less than 20% for aqueous samples and less than 35% for soil samples for concentrations greater than five times the reporting limit (RL). For sample concentrations less than five times the RL, the QC criteria are within  $\pm$  the RL for the aqueous matrix or  $\pm$  two times the RL for the soil matrix. All QC criteria were not met. No qualifications are placed on the data.

##### B. Field Duplicate Analysis:

The following sample pair was submitted as field duplicates for the soil matrix: JB-41-31-110928/JB-41-32-110928. QC criteria are that the RPD values for the field duplicate sample analysis be less than 30% for aqueous samples and less than 50% for soil samples for concentrations greater than five times the RL. For sample concentrations less than five times the RL, the QC criteria is that the absolute difference between the samples is less than two times the RL for aqueous samples or 3.5 times the RL for the soil matrix. All QC criteria were not met. No qualifications are placed on the data.

#### 10. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis:

Sample AR-01-31-110928 underwent MS/MSD analysis for the soil matrix. The spike recoveries for the following analytes were outside of the 75%-125% QC recovery limits for analytes whose sample concentration did not exceed the spike concentration by a factor of 4 times or more:

ANALYTE	MATRIX	%R/%R	AFFECTED SAMPLES	QUALIFIER FLAG
Antimony	Soil	52/55	All	UJL
Vanadium	Soil	126/127	All	JH

#### 11. ICP Serial Dilution:

Sample AR-01-31-110928 underwent serial dilution. The Percent Difference (%D) values for ICP serial dilution analysis were within the QC limits of 10% for all analytes with concentrations greater than 50 times their method detection limit (MDL) with the following exception

ANALYTE	MATRIX	%D	AFFECTED SAMPLES	QUALIFIER FLAG
Potassium	Soil	19	All	JK

#### 12. Sample Quantitation and Reporting Limits:

Concentrations of all reported analytes were correctly calculated.

Some samples were analyzed at a dilution to keep the analyte concentrations within the linear range of the instrument. Reporting limits in these samples are elevated as a result of the dilutions performed.

13. Laboratory Contact

No laboratory contact was required.

14. Overall Assessment:

The antimony results in all samples were estimated due to low MS/MSD recoveries.

The vanadium results in all samples were estimated due to high MS/MSD recoveries.

The potassium results in all samples were estimated due to high serial dilution %D.

The analytical data is acceptable for use with the qualifications listed above.

# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental – FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

Client/Project ID: John Bully Mine TO 0035110603-110929-0002

Field ID: AR-01-31-110928

Lab ID: 1109363-1

Sample Matrix: SOIL

% Moisture: 5.3

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.004 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	9500	21		
7440-36-0	ANTIMONY	1	2.1	2.1	U	✓
7440-38-2	ARSENIC	1	19	1.1		
7440-39-3	BARIUM	1	130	11		
7440-41-7	BERYLLIUM	1	0.92	0.53		
7440-43-8	CADMIUM	1	0.53	0.53	U	
7440-70-2	CALCIUM	1	39000	110		
7440-47-3	CHROMIUM	1	7.9	1.1		
7440-48-4	COBALT	1	6.6	1.1		
7440-50-8	COPPER	1	21	1.1		
7439-89-6	IRON	1	19000	11		
7439-92-1	LEAD	1	23	0.32		
7439-95-4	MAGNESIUM	1	4600	110		
7439-96-5	MANGANESE	1	320	1.1		
7439-98-7	MOLYBDENUM	1	15	1.1		
7440-02-0	NICKEL	1	12	2.1		
7440-09-7	POTASSIUM	1	3200	110		✓
7782-49-2	SELENIUM	1	15	0.53		
7440-22-4	SILVER	1	1.1	1.1	U	
7440-23-5	SODIUM	1	170	110		
7440-28-0	THALLIUM	1	1.1	1.1	U	
7440-31-5	TIN	1	5.3	5.3	U	
7440-62-2	VANADIUM	1	93	1.1		✓
7440-66-6	ZINC	1	51	2.1		

VJL

JK

JH

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

Client/Project ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-11-31-110928

Lab ID: 1109363-2

Sample Matrix: SOIL

% Moisture: 0.9

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.009 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2200	20		
7440-36-0	ANTIMONY	1	2	2	U	
7440-38-2	ARSENIC	1	5.3	1		
7440-39-3	BARIUM	1	38	10		
7440-41-7	BERYLLIUM	1	0.5	0.5	U	
7440-43-9	CADMIUM	1	0.5	0.5	U	
7440-70-2	CALCIUM	1	8700	100		
7440-47-3	CHROMIUM	1	2.1	1		
7440-48-4	COBALT	1	2.6	1		
7440-50-8	COPPER	1	4.2	1		
7439-89-6	IRON	1	9300	10		
7439-92-1	LEAD	1	8.9	0.3		
7439-95-4	MAGNESIUM	1	1700	100		
7439-96-5	MANGANESE	1	140	1		
7439-98-7	MOLYBDENUM	1	4.8	1		
7440-02-0	NICKEL	1	3.5	2		
7440-09-7	POTASSIUM	1	1100	100		
7782-49-2	SELENIUM	1	2.6	0.5		
7440-22-4	SILVER	1	1	1	U	
7440-23-5	SODIUM	1	100	100	U	
7440-28-0	THALLIUM	1	1	1	U	
7440-31-5	TIN	1	5	5	U	
7440-62-2	VANADIUM	1	16	1		
7440-68-6	ZINC	1	23	2		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental – FC  
Work Order Number: 1109363  
Client Name: Weston Solutions, Inc.  
ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-30-31-110928  
Lab ID: 1109363-3

Sample Matrix: SOIL  
% Moisture: 0.9  
Date Collected: 28-Sep-11  
Date Extracted: 07-Oct-11  
Date Analyzed: 10-Oct-11  
Prep Method: SW3050 Rev B

Prep Batch: IP111007-4  
QCBatchID: IP111007-4-5  
Run ID: IT111010-2A1  
Cleanup: NONE  
Basis: Dry Weight  
File Name: 111010A

Sample Aliquot: 1.032 g  
Final Volume: 100 ml  
Result Units: MG/KG  
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2600	20		
7440-36-0	ANTIMONY	1	2	2	U	
7440-38-2	ARSENIC	1	3.5	0.98		
7440-39-3	BARIUM	1	49	9.8		
7440-41-7	BERYLLIUM	1	0.49	0.49	U	
7440-43-9	CADMIUM	1	0.49	0.49	U	
7440-70-2	CALCIUM	1	7700	98		
7440-47-3	CHROMIUM	1	2.5	0.98		
7440-48-4	COBALT	1	3.3	0.98		
7440-50-8	COPPER	1	4.4	0.98		
7439-89-6	IRON	1	9900	9.8		
7439-92-1	LEAD	1	6.4	0.29		
7439-95-4	MAGNESIUM	1	2500	98		
7439-96-5	MANGANESE	1	150	0.98		
7439-98-7	MOLYBDENUM	1	0.98	0.98	U	
7440-02-0	NICKEL	1	4.2	2		
7440-09-7	POTASSIUM	1	1100	98		
7782-49-2	SELENIUM	1	0.88	0.49		
7440-22-4	SILVER	1	0.98	0.98	U	
7440-23-5	SODIUM	1	98	98	U	
7440-28-0	THALLIUM	1	0.98	0.98	U	
7440-31-5	TIN	1	4.9	4.9	U	
7440-62-2	VANADIUM	1	9.1	0.98		
7440-66-6	ZINC	1	24	2		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental – FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

Client/Project ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-41-31-110928

Lab ID: 1109363-4

Sample Matrix: SOIL

% Moisture: 1.1

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QC Batch ID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.014 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2700	20		
7440-36-0	ANTIMONY	1	2	2		
7440-38-2	ARSENIC	1	4.2	1		
7440-39-3	BARIUM	1	43	10		
7440-41-7	BERYLLIUM	1	0.5	0.5	U	
7440-43-9	CADMIUM	1	0.5	0.5	U	
7440-70-2	CALCIUM	1	7400	100		
7440-47-3	CHROMIUM	1	2.7	1		
7440-48-4	COBALT	1	3.8	1		
7440-50-8	COPPER	1	5.2	1		
7439-89-6	IRON	1	12000	10		
7439-92-1	LEAD	1	6.8	0.3		
7439-95-4	MAGNESIUM	1	2200	100		
7439-96-5	MANGANESE	1	160	1		
7439-98-7	MOLYBDENUM	1	1	1	U	
7440-02-0	NICKEL	1	4.8	2		
7440-09-7	POTASSIUM	1	820	100		
7782-49-2	SELENIUM	1	0.5	0.5	U	
7440-22-4	SILVER	1	1	1	U	
7440-23-5	SODIUM	1	100	100	U	
7440-28-0	THALLIUM	1	1	1	U	
7440-31-5	TIN	1	5	5	U	
7440-62-2	VANADIUM	1	10	1		
7440-68-6	ZINC	1	28	2		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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LIMS Version: 6.536

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-41-32-110928

Lab ID: 1109363-5

Sample Matrix: SOIL

% Moisture: 1.1

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QC Batch ID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.037 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2500	19		
7440-36-0	ANTIMONY	1	1.9	1.9	U	
7440-38-2	ARSENIC	1	4	0.97		
7440-39-3	BARIUM	1	42	9.7		
7440-41-7	BERYLLIUM	1	0.49	0.49	U	
7440-43-9	CADMIUM	1	0.49	0.49	U	
7440-70-2	CALCIUM	1	6800	97		
7440-47-3	CHROMIUM	1	2.5	0.97		
7440-48-4	COBALT	1	3.6	0.97		
7440-50-8	COPPER	1	4.6	0.97		
7439-89-6	IRON	1	10000	9.7		
7439-92-1	LEAD	1	6.1	0.29		
7439-95-4	MAGNESIUM	1	2100	97		
7439-96-5	MANGANESE	1	140	0.97		
7439-98-7	MOLYBDENUM	1	0.97	0.97	U	
7440-02-0	NICKEL	1	4.5	1.9		
7440-09-7	POTASSIUM	1	760	97		
7782-49-2	SELENIUM	1	0.49	0.49	U	
7440-22-4	SILVER	1	0.97	0.97	U	
7440-23-5	SODIUM	1	97	97	U	
7440-28-0	THALLIUM	1	0.97	0.97	U	
7440-31-5	TIN	1	4.9	4.9	U	
7440-82-2	VANADIUM	1	8.6	0.97		
7440-66-6	ZINC	1	25	1.9		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

ALS Environmental -- FC

LIMS Version: 6.536

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-48-31-110928

Lab ID: 1109363-6

Sample Matrix: SOIL

% Moisture: 1.0

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.014 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2800	20		
7440-36-0	ANTIMONY	1	2	2	U	
7440-38-2	ARSENIC	1	3.9	1		
7440-39-3	BARIUM	1	51	10		
7440-41-7	BERYLLIUM	1	0.5	0.5	U	
7440-43-9	CADMIUM	1	0.5	0.5	U	
7440-70-2	CALCIUM	1	8600	100		
7440-47-3	CHROMIUM	1	2.7	1		
7440-48-4	COBALT	1	3	1		
7440-50-8	COPPER	1	5.1	1		
7439-89-6	IRON	1	10000	10		
7439-92-1	LEAD	1	6.5	0.3		
7439-95-4	MAGNESIUM	1	2600	100		
7439-96-5	MANGANESE	1	140	1		
7439-98-7	MOLYBDENUM	1	1	1	U	
7440-02-0	NICKEL	1	4.6	2		
7440-09-7	POTASSIUM	1	1400	100		
7782-49-2	SELENIUM	1	0.89	0.5		
7440-22-4	SILVER	1	1	1	U	
7440-23-5	SODIUM	1	100	100	U	
7440-28-0	THALLIUM	1	1	1	U	
7440-31-5	TIN	1	5	5	U	
7440-62-2	VANADIUM	1	9.5	1		
7440-66-6	ZINC	1	26	2		

Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental – FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-67-31-110928	Sample Matrix: SOIL	Prep Batch: IP111007-4	Sample Aliquot: 1.027 g
Lab ID: 1109363-7	% Moisture: 1.3	QCBatchID: IP111007-4-5	Final Volume: 100 ml
	Date Collected: 28-Sep-11	Run ID: IT111010-2A1	Result Units: MG/KG
	Date Extracted: 07-Oct-11	Cleanup: NONE	Clean DF: 1
	Date Analyzed: 10-Oct-11	Basis: Dry Weight	
	Prep Method: SW3050 Rev B	File Name: 111010A.	

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2800	20		
7440-36-0	ANTIMONY	1	2	2	U	
7440-38-2	ARSENIC	1	4.2	0.99		
7440-39-3	BARIUM	1	55	9.9		
7440-41-7	BERYLLIUM	1	0.49	0.49	U	
7440-43-9	CADMIUM	1	0.49	0.49	U	
7440-70-2	CALCIUM	1	8600	99		
7440-47-3	CHROMIUM	1	2.7	0.99		
7440-48-4	COBALT	1	3.9	0.99		
7440-50-8	COPPER	1	5.1	0.99		
7439-89-6	IRON	1	11000	9.9		
7439-92-1	LEAD	1	6.7	0.3		
7439-95-4	MAGNESIUM	1	2500	99		
7439-96-5	MANGANESE	1	140	0.99		
7439-98-7	MOLYBDENUM	1	0.99	0.99	U	
7440-02-0	NICKEL	1	5	2		
7440-09-7	POTASSIUM	1	620	99		
7782-49-2	SELENIUM	1	0.62	0.49		
7440-22-4	SILVER	1	0.99	0.99	U	
7440-23-5	SODIUM	1	99	99	U	
7440-28-0	THALLIUM	1	0.99	0.99	U	
7440-31-5	TIN	1	4.9	4.9	U	
7440-62-2	VANADIUM	1	10	0.99		
7440-66-6	ZINC	1	27	2		

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Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental – FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JB-68-31-110928

Lab ID: 1109363-8

Sample Matrix: SOIL

% Moisture: 1.1

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.029 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2500	20		
7440-36-0	ANTIMONY	1	2	2	J	
7440-38-2	ARSENIC	1	5.1	0.98		
7440-39-3	BARIUM	1	61	9.8		
7440-41-7	BERYLLIUM	1	0.49	0.49	U	
7440-43-9	CADMIUM	1	0.49	0.49	U	
7440-70-2	CALCIUM	1	8700	98		
7440-47-3	CHROMIUM	1	2.3	0.98		
7440-48-4	COBALT	1	3.1	0.98		
7440-50-8	COPPER	1	4.4	0.98		
7439-89-6	IRON	1	10000	9.8		
7439-92-1	LEAD	1	6.3	0.29		
7439-95-4	MAGNESIUM	1	2000	98		
7439-96-5	MANGANESE	1	160	0.98		
7439-98-7	MOLYBDENUM	1	5	0.98		
7440-02-0	NICKEL	1	4.4	2		
7440-09-7	POTASSIUM	1	570	98		
7782-49-2	SELENIUM	1	2.9	0.49		
7440-22-4	SILVER	1	0.98	0.98	U	
7440-23-5	SODIUM	1	98	98	U	
7440-28-0	THALLIUM	1	0.98	0.98	U	
7440-31-5	TIN	1	4.9	4.9	U	
7440-62-2	VANADIUM	1	13	0.98		
7440-66-6	ZINC	1	24	2		

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Data Package ID: IT1109363-1

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC  
Work Order Number: 1109363  
Client Name: Weston Solutions, Inc.  
Client/Project ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JBBKGD-E-31-110928  
Lab ID: 1109363-9

Sample Matrix: SOIL  
% Moisture: 1.5  
Date Collected: 28-Sep-11  
Date Extracted: 07-Oct-11  
Date Analyzed: 10-Oct-11  
Prep Method: SW3050 Rev B

Prep Batch: IP111007-4  
QCBatchID: IP111007-4-5  
Run ID: IT111010-2A1  
Cleanup: NONE  
Basis: Dry Weight  
File Name: 111010A.

Sample Aliquot: 1.023 g  
Final Volume: 100 ml  
Result Units: MG/KG  
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	3800	20		
7440-38-0	ANTIMONY	1	2	2		
7440-38-2	ARSENIC	1	3.2	0.99		
7440-39-3	BARIUM	1	70	9.9		
7440-41-7	BERYLLIUM	1	0.5	0.5	U	
7440-43-9	CADMIUM	1	0.5	0.5	U	
7440-70-2	CALCIUM	1	3500	99		
7440-47-3	CHROMIUM	1	3.5	0.99		
7440-48-4	COBALT	1	2.7	0.99		
7440-50-8	COPPER	1	5.5	0.99		
7439-89-6	IRON	1	9400	9.9		
7439-92-1	LEAD	1	6.6	0.3		
7439-95-4	MAGNESIUM	1	1800	99		
7439-96-5	MANGANESE	1	120	0.99		
7439-98-7	MOLYBDENUM	1	0.99	0.99	U	
7440-02-0	NICKEL	1	5	2		
7440-09-7	POTASSIUM	1	1100	99		
7782-49-2	SELENIUM	1	0.5	0.5	U	
7440-22-4	SILVER	1	0.99	0.99	U	
7440-23-5	SODIUM	1	99	99	U	
7440-28-0	THALLIUM	1	0.99	0.99	U	
7440-31-5	TIN	1	5	5	U	
7440-62-2	VANADIUM	1	9.6	0.99		
7440-66-6	ZINC	1	22	2		

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Data Package ID: IT1109363-1

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# Total ICP Metals

## Method SW6010B

### Sample Results

Lab Name: ALS Environmental – FC  
Work Order Number: 1109363  
Client Name: Weston Solutions, Inc.  
ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JBBKGD-S-31-110928  
Lab ID: 1109363-10

Sample Matrix: SOIL  
% Moisture: 1.0  
Date Collected: 28-Sep-11  
Date Extracted: 07-Oct-11  
Date Analyzed: 10-Oct-11  
Prep Method: SW3050 Rev B

Prep Batch: IP111007-4  
QCBatchID: IP111007-4-5  
Run ID: IT111010-2A1  
Cleanup: NONE  
Basis: Dry Weight  
File Name: 111010A.

Sample Aliquot: 1.041 g  
Final Volume: 100 ml  
Result Units: MG/KG  
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2900	19		
7440-38-0	ANTIMONY	1	1.9	1.9	U	
7440-38-2	ARSENIC	1	3.5	0.97		
7440-39-3	BARIUM	1	58	9.7		
7440-41-7	BERYLLIUM	1	0.49	0.49	U	
7440-43-9	CADMIUM	1	0.49	0.49	U	
7440-70-2	CALCIUM	1	7300	97		
7440-47-3	CHROMIUM	1	2.8	0.97		
7440-48-4	COBALT	1	3	0.97		
7440-50-8	COPPER	1	4.8	0.97		
7439-89-6	IRON	1	9400	9.7		
7439-92-1	LEAD	1	6.3	0.29		
7439-95-4	MAGNESIUM	1	2500	97		
7439-98-5	MANGANESE	1	130	0.97		
7439-98-7	MOLYBDENUM	1	0.97	0.97	U	
7440-02-0	NICKEL	1	4.5	1.9		
7440-09-7	POTASSIUM	1	1800	97		
7782-49-2	SELENIUM	1	0.49	0.49	U	
7440-22-4	SILVER	1	0.97	0.97	U	
7440-23-5	SODIUM	1	97	97	U	
7440-28-0	THALLIUM	1	0.97	0.97	U	
7440-31-5	TIN	1	4.9	4.9	U	
7440-62-2	VANADIUM	1	8.6	0.97		
7440-68-6	ZINC	1	24	1.9		

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Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total ICP Metals

Method SW6010B

Sample Results

Lab Name: ALS Environmental -- FC  
Work Order Number: 1109363  
Client Name: Weston Solutions, Inc.  
ClientProject ID: John Bully Mine TO 0035110603-110929-0002

Field ID: JBBKGD-W-31-110928  
Lab ID: 1109363-11

Sample Matrix: SOIL  
% Moisture: 0.7  
Date Collected: 28-Sep-11  
Date Extracted: 07-Oct-11  
Date Analyzed: 10-Oct-11  
Prep Method: SW3050 Rev B

Prep Batch: IP111007-4  
QCBatchID: IP111007-4-5  
Run ID: IT111010-2A1  
Cleanup: NONE  
Basis: Dry Weight  
File Name: 111010A.

Sample Aliquot: 1.034 g  
Final Volume: 100 ml  
Result Units: MG/KG  
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	2100	19		
7440-36-0	ANTIMONY	1	1.9	1.9	U	
7440-38-2	ARSENIC	1	3	0.97		
7440-39-3	BARIUM	1	42	9.7		
7440-41-7	BERYLLIUM	1	0.49	0.49	U	
7440-43-9	CADMIUM	1	0.49	0.49	U	
7440-70-2	CALCIUM	1	5800	97		
7440-47-3	CHROMIUM	1	2.1	0.97		
7440-48-4	COBALT	1	2.8	0.97		
7440-50-8	COPPER	1	4.2	0.97		
7439-89-6	IRON	1	9200	9.7		
7439-92-1	LEAD	1	5.5	0.29		
7439-95-4	MAGNESIUM	1	1900	97		
7439-96-5	MANGANESE	1	130	0.97		
7439-98-7	MOLYBDENUM	1	0.97	0.97	U	
7440-02-0	NICKEL	1	3.7	1.9		
7440-09-7	POTASSIUM	1	890	97		
7782-49-2	SELENIUM	1	0.49	0.49	U	
7440-22-4	SILVER	1	0.97	0.97	U	
7440-23-5	SODIUM	1	97	97	U	
7440-28-0	THALLIUM	1	0.97	0.97	U	
7440-31-5	TIN	1	4.9	4.9	U	
7440-62-2	VANADIUM	1	8.3	0.97		
7440-66-6	ZINC	1	24	1.9		

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Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total ICP Metals

Method SW6010B

## Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1109363

Client Name: Weston Solutions, Inc.

Client/Project ID: John Bully Mine TO 0035110603-110929-0002

Field ID: VTP-01-31-110928

Lab ID: 1109363-12

Sample Matrix: SOIL

% Moisture: 4.0

Date Collected: 28-Sep-11

Date Extracted: 07-Oct-11

Date Analyzed: 10-Oct-11

Prep Method: SW3050 Rev B

Prep Batch: IP111007-4

QCBatchID: IP111007-4-5

Run ID: IT111010-2A1

Cleanup: NONE

Basis: Dry Weight

File Name: 111010A.

Sample Aliquot: 1.001 g

Final Volume: 100 ml

Result Units: MG/KG

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	8700	21		
7440-36-0	ANTIMONY	1	2.1	2.1	J	
7440-38-2	ARSENIC	1	15	1		
7440-39-3	BARIUM	1	110	10		
7440-41-7	BERYLLIUM	1	1.1	0.52		
7440-43-9	CADMIUM	1	0.52	0.52	U	
7440-70-2	CALCIUM	1	18000	100		
7440-47-3	CHROMIUM	1	8.2	1		
7440-48-4	COBALT	1	8	1		
7440-50-8	COPPER	1	39	1		
7439-89-6	IRON	5	23000	52		
7439-92-1	LEAD	5	30	1.8		
7439-95-4	MAGNESIUM	1	4400	100		
7439-96-5	MANGANESE	1	230	1		
7439-98-7	MOLYBDENUM	1	18	1		
7440-02-0	NICKEL	1	12	2.1		
7440-09-7	POTASSIUM	1	2600	100		
7782-49-2	SELENIUM	5	11	2.6		
7440-22-4	SILVER	1	1	1	U	
7440-23-5	SODIUM	1	140	100		
7440-28-0	THALLIUM	5	5.2	5.2	U	
7440-31-5	TIN	1	5.2	5.2	U	
7440-62-2	VANADIUM	5	100	5.2		
7440-66-6	ZINC	1	62	2.1		

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Data Package ID: IT1109363-1

Date Printed: Thursday, October 13, 2011

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# Total URANIUM

## Method SW6020A

### Sample Results

Lab Name: ALS Environmental – FC  
Client Name: Weston Solutions, Inc.  
Client Project ID: John Bully Mine TO 0035110603-110929-0002  
Work Order Number: 1109363 Final Volume: 100 ml  
Reporting Basis: Dry Weight Matrix: SOIL  
Prep Method: SW3050B Result Units: UG/KG

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
AR-01-31-110928	1109363-1	09/28/2011	10/07/2011	10/12/2011	5.3	100	110000	110	✓	1.004 g
JB-11-31-110928	1109363-2	09/28/2011	10/07/2011	10/12/2011	0.9	100	45000	100		1.009 g
JB-30-31-110928	1109363-3	09/28/2011	10/07/2011	10/12/2011	0.9	10	2300	9.8		1.032 g
JB-41-31-110928	1109363-4	09/28/2011	10/07/2011	10/12/2011	1.1	10	2600	10		1.014 g
JB-41-32-110928	1109363-5	09/28/2011	10/07/2011	10/12/2011	1.1	10	2100	9.7		1.037 g
JB-48-31-110928	1109363-6	09/28/2011	10/07/2011	10/12/2011	1.0	10	2600	10		1.014 g
JB-67-31-110928	1109363-7	09/28/2011	10/07/2011	10/12/2011	1.3	10	5700	9.9		1.027 g
JB-68-31-110928	1109363-8	09/28/2011	10/07/2011	10/12/2011	1.1	10	15000	9.8		1.029 g
JBBKGD-E-31-110928	1109363-9	09/28/2011	10/07/2011	10/12/2011	1.5	10	1100	9.9		1.023 g
JBBKGD-S-31-110928	1109363-10	09/28/2011	10/07/2011	10/12/2011	1.0	10	920	9.7		1.041 g
JBBKGD-W-31-110928	1109363-11	09/28/2011	10/07/2011	10/12/2011	0.7	10	800	9.7		1.034 g
VTP-01-31-110928	1109363-12	09/28/2011	10/07/2011	10/12/2011	4.0	100	36000	100		1.001 g

#### Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: IM1109363-1

Date Printed: Thursday, October 13, 2011

ALS Environmental – FC

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# Total MERCURY

## Method SW7471A

### Sample Results

Lab Name: ALS Environmental -- FC  
Client Name: Weston Solutions, Inc.  
Client Project ID: John Bully Mine TO 0035110603-110929-0002  
Work Order Number: 1109363 Final Volume: 100 g  
Reporting Basis: Dry Weight Matrix: SOIL  
Prep Method: METHOD Result Units: MG/KG

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
AR-01-31-110928	1109363-1	09/28/2011	10/10/2011	10/10/2011	5.3	1	0.046	0.034		0.617 g
JB-11-31-110928	1109363-2	09/28/2011	10/10/2011	10/10/2011	0.9	1	0.034	0.034	U	0.6 g
JB-30-31-110928	1109363-3	09/28/2011	10/10/2011	10/10/2011	0.9	1	0.033	0.033	U	0.616 g
JB-41-31-110928	1109363-4	09/28/2011	10/10/2011	10/10/2011	1.1	1	0.034	0.034	U	0.603 g
JB-41-32-110928	1109363-5	09/28/2011	10/10/2011	10/10/2011	1.1	1	0.034	0.034	U	0.603 g
JB-48-31-110928	1109363-6	09/28/2011	10/10/2011	10/10/2011	1.0	1	0.033	0.033	U	0.615 g
JB-67-31-110928	1109363-7	09/28/2011	10/10/2011	10/10/2011	1.3	1	0.033	0.033	U	0.615 g
JB-68-31-110928	1109363-8	09/28/2011	10/10/2011	10/10/2011	1.1	1	0.033	0.033	U	0.608 g
JBBKGD-E-31-110928	1109363-9	09/28/2011	10/10/2011	10/10/2011	1.5	1	0.033	0.033	U	0.611 g
JBBKGD-S-31-110928	1109363-10	09/28/2011	10/10/2011	10/10/2011	1.0	1	0.033	0.033	U	0.608 g
JBBKGD-W-31-110928	1109363-11	09/28/2011	10/10/2011	10/10/2011	0.7	1	0.033	0.033	U	0.602 g
VTP-01-31-110928	1109363-12	09/28/2011	10/10/2011	10/10/2011	4.0	1	0.097	0.034		0.609 g

#### Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: HG1109363-1

Date Printed: Thursday, October 13, 2011

ALS Environmental -- FC

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## **APPENDIX F**

### **REFERENCE DOCUMENTATION**



BILL RICHARDSON  
Governor  
DIANE DENISH  
Lieutenant Governor

NEW MEXICO  
ENVIRONMENT DEPARTMENT

*Ground Water Quality Bureau*

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Santa Fe, NM 87502-5469  
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RON CURRY  
Secretary  
SARAH COTTRELL  
Deputy Secretary

**Memorandum**

**To:** LaDonna Turner, Site Assessment Manager  
Technical and Enforcement Branch  
U.S. Environmental Protection Agency, Region 6

**From:** Dana Bahar, Manager, Superfund Oversight Section  
Ground Water Quality Bureau, New Mexico Environment  
Department

**Date:** August 16, 2010

**Subject:** Pre-CERCLIS Screening Assessment of the John Bull Mine,  
New Mexico: Further action under CERCLA recommended

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<b>Site name</b>	John Bully mine	<b>Alternative names</b>	John Bill, John Bull, John Bully shaft
<b>Street address</b>	not applicable	<b>City</b>	not applicable
<b>Zip code</b>	not applicable	<b>State</b>	New Mexico
		<b>County</b>	McKinley
<b>Latitude</b>	35.400139	<b>Longitude</b>	-107.780463
		<b>TRS</b>	14N, 9W, s. 34

**Site physical description:**

In 2007, the John Bully minesite ("Site") comprised an approximately 4-acre reclaimed area. The mineshaft was initially reclaimed and seeded in 1994. The only remaining visible feature then was an abandoned wooden-framed electrical substation structure (Ref. 1).

**Site identification:**

The site is one of numerous legacy uranium sites within the Grants Mining District.

**Site summary:**

The Site was operated between 1959 and 1963 by Phillips Petroleum, and from 1963 until 1980 by United Nuclear Corporation ("UNC;" Ref. 2). Mining operations necessitated dewatering of the ore body; uranium was extracted from the mine water effluent during the operation (Ref. 3).

**Targets:**

The Site is located within 600 ft of the Voght Tank and 300 ft of a ditch shown on the

topographic map; the Voght Tank is documented to have received effluent from mining operations, and drains into the Arroyo del Puerto ("AdP").

Well records from the New Mexico Office of the State Engineer that are located within a four-mile radius of the Site are shown in the table following (Ref. 4).

**Site ownership and Potential Responsible Parties:**

Surface rights are owned by UNC. Hecla Mining Company owns the mineral rights (Ref. 5).

**File review:**

Files that were reviewed for this assessment are listed below.

**Site reconnaissance:**

The most recent site reconnaissance occurred in 2007.

**Recommendation:**

The New Mexico Environment Department has found little specific documentation about the Site. A current Site reconnaissance is recommended. A radiological survey of surface drainages and erosional features crossing or originating from the Site is recommended to assess possible impacts to sediments.

Currently, the existence of regional impacts from legacy uranium sites to the ground water system has not been determined. Ground water was pumped from the John Bully mine in order to access the ore deposits and probably was discharged into the nearby ditch, which empties to the Voght Tank and eventually to the AdP drainage. This ditch near the Site and the Voght Tank should be surveyed to attempt to determine where the effluent discharge may have been routed; radiological surveying and sediment sampling to depth also is recommended to determine potential impacts to sediments. Impacts from the Site may be difficult to discriminate from impacts originating from other legacy uranium sites that utilized the same drainage system. A generalized investigation of potential alluvial ground water impacts from "wet" former uranium mines within the Grants Mining District is recommended as part of regional ground water quality characterization. If this generalized investigation were to indicate a potential for alluvial ground water impacts, on-Site installation of one or more monitor wells then should be considered.

Data from other former "wet" mines suggest that repressurization of the ore-host rock, following cessation of pumping for mine dewatering, may be causing mobilization of uranium and associated minerals, and consequent degradation of ground water quality, due to influx of oxygenated ground water. The potential for such impacts, on both regional and site-specific scales, should also be assessed and characterized.

Distance from Site (miles)	OSE record number	Owner's last name	use	finish date	depth well (ft)	depth to water (ft)	casing diameter (in.)	yield (gpm)
2.0 – 3.0	B 01190	(b) (6)	STK	08/31/1989	390	37		15.0
3.0 – 4.0	B 00456	(b) (6)	STK		0	0		
	B 00522	UNITED NUCLEAR-HOMESTAKE PTNRS	MON	02/07/1978	70	0		
	B 00522	UNITED NUCLEAR-HOMESTAKE PTNRS	MON	02/07/1978	70	0	5.0	0.0
	B 01104	(b) (6)	DOM	04/02/1986	303	247	4.0	12.0
	B 01115	(b) (6)	DOM	07/21/1986	478	204	4.0	30.0
	B 01544	(b) (6)	DOM	06/14/2003	715	624	5.0	6.0
	B 01636	(b) (6)	DOM	05/10/2005	260	80	4.0	5.0

DOM -- 72-12-1 DOMESTIC ONE HOUSEHOLD

MON -- MONITORING WELL

STK -- 72-12-1 LIVESTOCK WATERING

- 
1. New Mexico Energy, Mineral, and Natural Resources Department, November 15, 2007. "Mining inspection report, Anne-Lee and John-Bill mines."
  2. New Mexico Energy, Mineral, and Natural Resources Department. 2007-07-20\_to\_NMED-GWQ-Sfund.xls.
  3. New Mexico Energy, Mineral, and Natural Resources Department. AUM\_AOI\_10Mar09.xls.
  4. New Mexico Office of the State Engineer. "May\_06\_wells." Shapefile.
  5. New Mexico Energy, Mineral, and Natural Resources Department. 20100603\_LUMs\_Assessment\_List\_EPA\_NMED.xls.

## **APPENDIX G**

**TDD NO. TO-0035-11-06-03 AND AMENDMENTS A - D**



**Assessment/Inspection Activities -  
Enforcement Funds (0035)  
Weston Solutions, Inc.**

! = required field ☐ Moved To EAS

Note: Remaining Amount  
includes \$0.00 in Reserve.

<b>TDD Name:</b> John Bully Uranium Mine		<b>! Period:</b> Base Period
<b>! Purpose:</b> Work Assignment Initiation , Set/Revise Expenditure Limit		
<b>! Priority:</b> High	<b>! Start Date:</b> 06/30/2011	
<b>Overtime:</b> Yes	<b>! Completion Date:</b> 12/30/2011	
<b>! Funding Category:</b> Enforcement Funding	Invoice Unit:	
<b>! Project/Site Name:</b> John Bully Uranium Mine		<b>WorkArea:</b> ASSESSMENT/INSPECTIONS ACTIVITIES
<b>Project Address:</b>		<b>Activity:</b> Integrated Assessment (IA)
<b>County:</b> McKinley	<b>Work Area Code:</b>	
<b>City, State:</b> , NM	<b>Activity Code:</b>	
<b>Zip:</b>	<b>EMERGENCY CODE:</b> <input type="checkbox"/> KAT <input type="checkbox"/> RIT	
<b>! SSID:</b> A6BB	<b>FPN:</b>	
<b>CERCLIS:</b> NMN000607164	<b>Performance Based:</b> No	
<b>Operable Unit:</b>		
<b>Authorized TDD Ceiling:</b>	<b>Cost/Fee</b>	<b>LOE (Hours)</b>
<b>Previous Action(s):</b>	\$0.00	0.0
<b>This Action:</b>	\$25,000.00	0.0
<b>New Total:</b>	\$25,000.00	0.0

**Specific Elements** Assess the potential for short or long term clean-up actions., Perform field screening and analysis of samples.

**Description of Work:**

**All activities performed in support of this TDD shall be in accordance with the contract and TO PWS.**

The Grants Mining District provided significant uranium extraction and production in New Mexico from the 1950s until late into the 20th century. There are three mining sub-districts within the Grants Mining District: Ambrosia Lake, Laguna, and Marquez. Land ownership within these sub-districts consists of public, tribal and private property. These mining sub-districts contain 97 former legacy uranium mines and five mill sites. The EPA is currently assessing the mine sites for releases that may have impacted soil, surface water and groundwater. Under this TDD, the contractor shall investigate mine water discharge locations, sample potentially impacted soil for elevated concentrations of elemental uranium and radionuclides, sample any surface water present for metals and radionuclides, and sample any accessible groundwater wells in the immediate area of three mine sites in the Ambrosia Lake sub-district. The contractor shall document mine site features (e.g. open mine portals, waste rock piles, mine operation-related structures, etc.) and sample locations with photographs, descriptions, and geospatially. A draft and final report will be written for the mine site. Coordinate with SAM, Lisa Price at [price.lisa@epa.gov](mailto:price.lisa@epa.gov) or 214-665-6744, upon receipt of the TDD.

**Accounting and Appropriation Information**

SFO: 22

Line	DCN	IFMS	Budget/ FY	Appropriati on Code	Budget Org Code	Program Element	Object Class	Site Project	Cost Org Code	Amount
1	ENC012	XXX	11	T	06S	302EC7C	2505	A6BBEA00	C001	\$25,000.00

Funding Summary:	Funding
Previous:	\$0.00
This Action:	\$25,000.00
Total:	\$25,000.00

**Funding Category**  
Enforcement Funding

#### Section

- Signed by Linda Carter/R6/USEPA/US on 06/29/2011 08:37:16 AM, according to Phyllis Caldwell/start6/r  
: Lisa Price Date: 06/28/2011

**Project Officer Section - Signed by Cora Stanley/R6/USEPA/US on 06/29/2011 10:36:14 AM, according to Ph**

**Project Officer:** Linda Carter **Date:** 06/29/2011

**Contracting Officer Section - Signed by Cora Stanley/R6/USEPA/US on 06/29/2011 10:36:14 AM, according to**

**Contracting Officer:** Cora Stanley **Date:** 06/29/2011

#### Contractor Section

**Contractor Contact:** **Date:**

**EPA**U.S. EPA  
Washington, DC 20460**START3**  
**Technical Direction Document**Assessment/Inspection Activities -  
Enforcement Funds (0035)  
Weston Solutions, Inc.

TDD #: TO-0035-11-06-03

Amendment#:A

Contract: EP-W-06-042

! = required field ☐ Moved To EAS

<b>TDD Name:</b> John Bully Uranium Mine		<b>! Period:</b> Base Period
<b>! Purpose:</b> Change Period of Performance		
<b>! Priority:</b> High		<b>! Start Date:</b> 06/30/2011
<b>Overtime:</b> Yes		<b>! Completion Date:</b> 02/15/2012
<b>! Funding Category:</b> Enforcement Funding		<b>Invoice Unit:</b>
<b>! Project/Site Name:</b> John Bully Uranium Mine		<b>WorkArea:</b> ASSESSMENT/INSPECTIONS ACTIVITIES
<b>Project Address:</b>		<b>Activity:</b> Integrated Assessment (IA)
<b>County:</b> McKinley		<b>Work Area Code:</b>
<b>City, State:</b> , NM		<b>Activity Code:</b>
<b>Zip:</b>		<b>EMERGENCY CODE:</b> <input type="checkbox"/> KAT <input type="checkbox"/> RIT
<b>! SSID:</b> A6BB		<b>FPN:</b>
<b>CERCLIS:</b> NMN000607164		<b>Performance Based:</b> No
<b>Operable Unit:</b>		
<b>Authorized TDD Ceiling:</b>	<b>Cost/Fee</b>	<b>LOE (Hours)</b>
<b>Previous Action(s):</b>	\$25,000.00	0.0
<b>This Action:</b>	\$0.00	0.0
<b>New Total:</b>	\$25,000.00	0.0

**Specific Elements** Assess the potential for short or long term clean-up actions., Perform field screening and analysis of samples.

**Description of Work:**

All activities performed in support of this TDD shall be in accordance with the contract and TO PWS.

Amendment A extends the period of performance to February 15, 2012 with no additional dollars added at this time. The Grants Mining District provided significant uranium extraction and production in New Mexico from the 1950s until late into the 20th century. There are three mining sub-districts within the Grants Mining District: Ambrosia Lake, Laguna, and Marquez. Land ownership within these sub-districts consists of public, tribal and private property. These mining sub-districts contain 97 former legacy uranium mines and five mill sites. The EPA is currently assessing the mine sites for releases that may have impacted soil, surface water and groundwater. Under this TDD, the contractor shall investigate mine water discharge locations, sample potentially impacted soil for elevated concentrations of elemental uranium and radionuclides, sample any surface water present for metals and radionuclides, and sample any accessible groundwater wells in the immediate area of three mine sites in the Ambrosia Lake sub-district. The contractor shall document mine site features (e.g. open mine portals, waste rock piles, mine operation-related structures, etc.) and sample locations with photographs, descriptions, and geospatially. A draft and final report will be written for the mine site. Coordinate with SAM, Lisa Price at [price.lisa@epa.gov](mailto:price.lisa@epa.gov) or 214-665-6744, upon receipt of the TDD.

**Accounting and Appropriation Information**

SFO:

Line	DCN	IFMS	Budget/ FY	Appropriati on Code	Budget Org Code	Program Element	Object Class	Site Project	Cost Org Code	Amount
1										\$0.00

Funding Summary:		Funding
Previous:		\$25,000.00
This Action:		\$0.00
Total:		\$25,000.00

**Funding Category**  
Enforcement Funding

#### Section

- Signed by Terri Lewis/DC/USEPA/US on 11/29/2011 11:53:19 AM, according to Cheng Wei Feng/sta

: Lisa Price

Date: 11/29/2011

Phone #:

Project Officer Section - Signed by Terri Lewis/DC/USEPA/US on 11/29/2011 11:53:19 AM, according to Ch

Project Officer: Linda Carter

Date: 11/29/2011

Contracting Officer Section - Signed by Terri Lewis/DC/USEPA/US on 11/29/2011 11:53:19 AM, according to

Contracting Officer: Cora Stanley

Date: 11/29/2011

Contractor Section - Signed by Terri Lewis/DC/USEPA/US on 11/29/2011 11:53:19 AM, according to Ch

Contractor Contact:

Date:

! = required field ☐ Moved To EAS

<b>TDD Name:</b> John Bully Uranium Mine		<b>! Period:</b> Base Period
<b>! Purpose:</b> Set/Revise Expenditure Limit		
<b>! Priority:</b> High		<b>! Start Date:</b> 06/30/2011
<b>Overtime:</b> Yes		<b>! Completion Date:</b> 02/15/2012
<b>! Funding Category:</b> Enforcement Funding		<b>Invoice Unit:</b>
<b>! Project/Site Name:</b> John Bully Uranium Mine		<b>WorkArea:</b> ASSESSMENT/INSPECTIONS ACTIVITIES
<b>Project Address:</b>		<b>Activity:</b> Integrated Assessment (IA)
<b>County:</b> McKinley		<b>Work Area Code:</b>
<b>City, State:</b> , NM		<b>Activity Code:</b>
<b>Zip:</b>		<b>EMERGENCY CODE:</b> <input type="checkbox"/> KAT <input type="checkbox"/> RIT
<b>! SSID:</b> A6BB		<b>FPN:</b>
<b>CERCLIS:</b> NMN000607164		<b>Performance Based:</b> No
<b>Operable Unit:</b>		
<b>Authorized TDD Ceiling:</b>	<b>Cost/Fee</b>	<b>LOE (Hours)</b>
<b>Previous Action(s):</b>	\$25,000.00	0.0
<b>This Action:</b>	\$5,000.00	0.0
<b>New Total:</b>	\$30,000.00	0.0

**Specific Elements** Assess the potential for short or long term clean-up actions., Perform field screening and analysis of samples.

**Description of Work:**

**All activities performed in support of this TDD shall be in accordance with the contract and TO PWS.**

Amendment B increases the dollar amount for the TDD by \$5000; the additional dollars are from a funding sweep of the Section 32 TDD. The new total funding is \$30,000.

Amendment A extends the period of performance to February 15, 2012 with no additional dollars added at this time. The Grants Mining District provided significant uranium extraction and production in New Mexico from the 1950s until late into the 20th century. There are three mining sub-districts within the Grants Mining District: Ambrosia Lake, Laguna, and Marquez. Land ownership within these sub-districts consists of public, tribal and private property. These mining sub-districts contain 97 former legacy uranium mines and five mill sites. The EPA is currently assessing the mine sites for releases that may have impacted soil, surface water and groundwater. Under this TDD, the contractor shall investigate mine water discharge locations, sample potentially impacted soil for elevated concentrations of elemental uranium and radionuclides, sample any surface water present for metals and radionuclides, and sample any accessible groundwater wells in the immediate area of three mine sites in the Ambrosia Lake sub-district. The contractor shall document mine site features (e.g. open mine portals, waste rock piles, mine operation-related structures, etc.) and sample locations with photographs, descriptions, and geospatially. A draft and final report will be written for the mine site. Coordinate with SAM, Lisa Price at [price.lisa@epa.gov](mailto:price.lisa@epa.gov) or 214-665-6744, upon receipt of the TDD.

**Accounting and Appropriation Information**

SFO: 22

Line	DCN	IFMS	Budget/ FY	Appropriati on Code	Budget Org Code	Program Element	Object Class	Site Project	Cost Org Code	Amount
1	ENC035	XXX	11	TCD	06S	302EC7C	2505	A6BB0000	C001	\$5,000.00

Funding Summary:	Funding
Previous:	\$25,000.00
This Action:	\$5,000.00
Total:	\$30,000.00

**Funding Category**

Enforcement Funding

**Section****- Signed by Lisa Price/R6/USEPA/US on 12/12/2011 02:08:30 PM, according to Cheng Wei Feng/start**

: Lisa Price

Date: 12/12/2011

**Phone #:****Project Officer Section - Signed by Linda Carter/R6/USEPA/US on 12/15/2011 07:55:37 AM, according to C****Project Officer:** Linda Carter**Date:** 12/14/2011**Contracting Officer Section - Signed by Cora Stanley/R6/USEPA/US on 12/14/2011 03:18:22 PM, according****Contracting Officer:** Cora Stanley**Date:** 12/14/2011**Contractor Section****Contractor Contact:****Date:**

! = required field ☐ Moved To EAS

<b>TDD Name:</b> John Bully Uranium Mine		<b>! Period:</b> Base Period
<b>! Purpose:</b> Change Period of Performance		
<b>! Priority:</b> High	<b>! Start Date:</b> 06/30/2011	
<b>Overtime:</b> Yes	<b>! Completion Date:</b> 03/30/2012	
<b>! Funding Category:</b> Enforcement Funding	Invoice Unit:	
<b>! Project/Site Name:</b> John Bully Uranium Mine		<b>WorkArea:</b> ASSESSMENT/INSPECTIONS ACTIVITIES
<b>Project Address:</b>		<b>Activity:</b> Integrated Assessment (IA)
<b>County:</b> McKinley	<b>Work Area Code:</b>	
<b>City, State:</b> , NM	<b>Activity Code:</b>	
<b>Zip:</b>	<b>EMERGENCY CODE:</b> <input type="checkbox"/> KAT <input type="checkbox"/> RIT	
<b>! SSID:</b> A6BB	<b>FPN:</b>	
<b>CERCLIS:</b> NMN000607164	<b>Performance Based:</b> No	
<b>Operable Unit:</b>		
<b>Authorized TDD Ceiling:</b>	<b>Cost/Fee</b>	<b>LOE (Hours)</b>
<b>Previous Action(s):</b>	\$30,000.00	0.0
<b>This Action:</b>	\$0.00	0.0
<b>New Total:</b>	\$30,000.00	0.0

**Specific Elements** Assess the potential for short or long term clean-up actions., Perform field screening and analysis of samples.

**Description of Work:**

**All activities performed in support of this TDD shall be in accordance with the contract and TO PWS.**

Amendment C extends the period of performance to March 30, 2012 with no additional dollars needed. Amendment B increases the dollar amount for the TDD by \$5000; the additional dollars are from a funding sweep of the Section 32 TDD. The new total funding is \$30,000.

Amendment A extends the period of performance to February 15, 2012 with no additional dollars added at this time. The Grants Mining District provided significant uranium extraction and production in New Mexico from the 1950s until late into the 20th century. There are three mining sub-districts within the Grants Mining District: Ambrosia Lake, Laguna, and Marquez. Land ownership within these sub-districts consists of public, tribal and private property. These mining sub-districts contain 97 former legacy uranium mines and five mill sites. The EPA is currently assessing the mine sites for releases that may have impacted soil, surface water and groundwater. Under this TDD, the contractor shall investigate mine water discharge locations, sample potentially impacted soil for elevated concentrations of elemental uranium and radionuclides, sample any surface water present for metals and radionuclides, and sample any accessible groundwater wells in the immediate area of three mine sites in the Ambrosia Lake sub-district. The contractor shall document mine site features (e.g. open mine portals, waste rock piles, mine operation-related structures, etc.) and sample locations with photographs, descriptions, and geospatially. A draft and final report will be written for the mine site. Coordinate with SAM, Lisa Price at

[price.lisa@epa.gov](mailto:price.lisa@epa.gov) or 214-665-6744, upon receipt of the TDD.

**Accounting and Appropriation Information**

SFO:										
Line	DCN	IFMS	Budget/ FY	Appropriation Code	Budget Org Code	Program Element	Object Class	Site Project	Cost Org Code	Amount
1										\$0.00

Funding Summary:		Funding
Previous:		\$30,000.00
This Action:		\$0.00
Total:		\$30,000.00

**Funding Category**  
Enforcement Funding

**Section**

- Signed by Lisa Price/R6/USEPA/US on 02/09/2012 01:23:37 PM, according to Cheng Wei Feng/start

: Lisa Price

Date: 02/09/2012

Phone #:

Project Officer Section - Signed by Cora Stanley/R6/USEPA/US on 02/09/2012 02:53:12 PM, according to C

Project Officer: Linda Carter

Date: 02/09/2012

Contracting Officer Section - Signed by Cora Stanley/R6/USEPA/US on 02/09/2012 02:53:12 PM, according

Contracting Officer: Cora Stanley

Date: 02/09/2012

Contractor Section

Contractor Contact:

Date:



**EPA**U.S. EPA  
Washington, DC 20460**START3**  
**Technical Direction Document**Assessment/Inspection Activities -  
Enforcement Funds (0035)  
Weston Solutions, Inc.

TDD #: TO-0035-11-06-03

Amendment#:D

Contract: EP-W-06-042

! = required field ☐ Moved To EAS

<b>TDD Name:</b> John Bully Uranium Mine		<b>! Period:</b> Base Period
<b>! Purpose:</b> Set/Revise Expenditure Limit		
<b>! Priority:</b> High		<b>! Start Date:</b> 06/30/2011
<b>Overtime:</b> Yes		<b>! Completion Date:</b> 03/30/2012
<b>! Funding Category:</b> Enforcement Funding		<b>Invoice Unit:</b>
<b>! Project/Site Name:</b> John Bully Uranium Mine		
		<b>WorkArea:</b> ASSESSMENT/INSPECTIONS ACTIVITIES
<b>Project Address:</b>		<b>Activity:</b> Integrated Assessment (IA)
<b>County:</b> McKinley		<b>Work Area Code:</b>
<b>City, State:</b> , NM		<b>Activity Code:</b>
<b>Zip:</b>		<b>EMERGENCY CODE:</b> <input type="checkbox"/> KAT <input type="checkbox"/> RIT
<b>! SSID:</b> A6BB		<b>FPN:</b>
<b>CERCLIS:</b> NMN000607164		<b>Performance Based:</b> No
<b>Operable Unit:</b>		
<b>Authorized TDD Ceiling:</b>	<b>Cost/Fee</b>	<b>LOE (Hours)</b>
<b>Previous Action(s):</b>	\$30,000.00	0.0
<b>This Action:</b>	\$3,000.00	0.0
<b>New Total:</b>	\$33,000.00	0.0

**Specific Elements** Assess the potential for short or long term clean-up actions., Perform field screening and analysis of samples.

**Description of Work:**

All activities performed in support of this TDD shall be in accordance with the contract and TO PWS.

Amendment D increases the dollar amount for the TDD by \$3000; the additional dollars are from a funding originally on the Ann Lee TDD. The new total funding is \$33,000.

Amendment C extends the period of performance to March 30, 2012 with no additional dollars needed.

Amendment B increases the dollar amount for the TDD by \$5000; the additional dollars are from a funding sweep of the Section 32 TDD. The new total funding is \$30,000.

Amendment A extends the period of performance to February 15, 2012 with no additional dollars added at this time. The Grants Mining District provided significant uranium extraction and production in New Mexico from the 1950s until late into the 20th century. There are three mining sub-districts within the Grants Mining District: Ambrosia Lake, Laguna, and Marquez. Land ownership within these sub-districts consists of public, tribal and private property. These mining sub-districts contain 97 former legacy uranium mines and five mill sites. The EPA is currently assessing the mine sites for releases that may have impacted soil, surface water and groundwater. Under this TDD, the contractor shall investigate mine water discharge locations, sample potentially impacted soil for elevated concentrations of elemental uranium and radionuclides, sample any surface water present for metals and radionuclides, and sample any accessible groundwater wells in the immediate area of three mine sites in the Ambrosia Lake sub-district. The contractor shall

document mine site features (e.g. open mine portals, waste rock piles, mine operation-related structures, etc.) and sample locations with photographs, descriptions, and geospatially. A draft and final report will be written for the mine site. Coordinate with SAM, Lisa Price at [price.lisa@epa.gov](mailto:price.lisa@epa.gov) or 214-665-6744, upon receipt of the TDD.

#### Accounting and Appropriation Information

SFO: 22

Line	DCN	IFMS	Budget/ FY	Appropriation Code	Budget Org Code	Program Element	Object Class	Site Project	Cost Org Code	Amount
1	ENC012	XXX	11	T	06S	302EC7C	2505	A6BB0000	C001	\$3,000.00

Funding Summary:	Funding
Previous:	\$30,000.00
This Action:	\$3,000.00
Total:	\$33,000.00

#### Funding Category

Enforcement Funding  
Enforcement

#### Section

- Signed by Lisa Price/R6/USEPA/US on 02/28/2012 03:45:24 PM, according to Cheng Wei Feng/start

: Lisa Price

Date: 02/28/2012

Phone #:

Project Officer Section - Signed by Cora Stanley/R6/USEPA/US on 03/02/2012 10:06:50 AM, according to C

Project Officer: Linda Carter

Date: 03/02/2012

Contracting Officer Section - Signed by Cora Stanley/R6/USEPA/US on 03/02/2012 10:06:50 AM, according

Contracting Officer: Cora Stanley

Date: 03/02/2012

Contractor Section

Contractor Contact:

Date:



0 2.5 5  
SCALE IN MILES

**LEGEND**

● JOHN BULLY MINE LOCATION



**US EPA REGION 6  
START- 3**

**FIGURE 1-1  
SITE LOCATION MAP  
JOHN BULLY URANIUM MINE  
AMBROSIA LAKE AREA  
MCKINLEY COUNTY, NEW MEXICO**

TDD NO: TO-0035-11-06-03  
CERCLIS NO.: NMN000607164

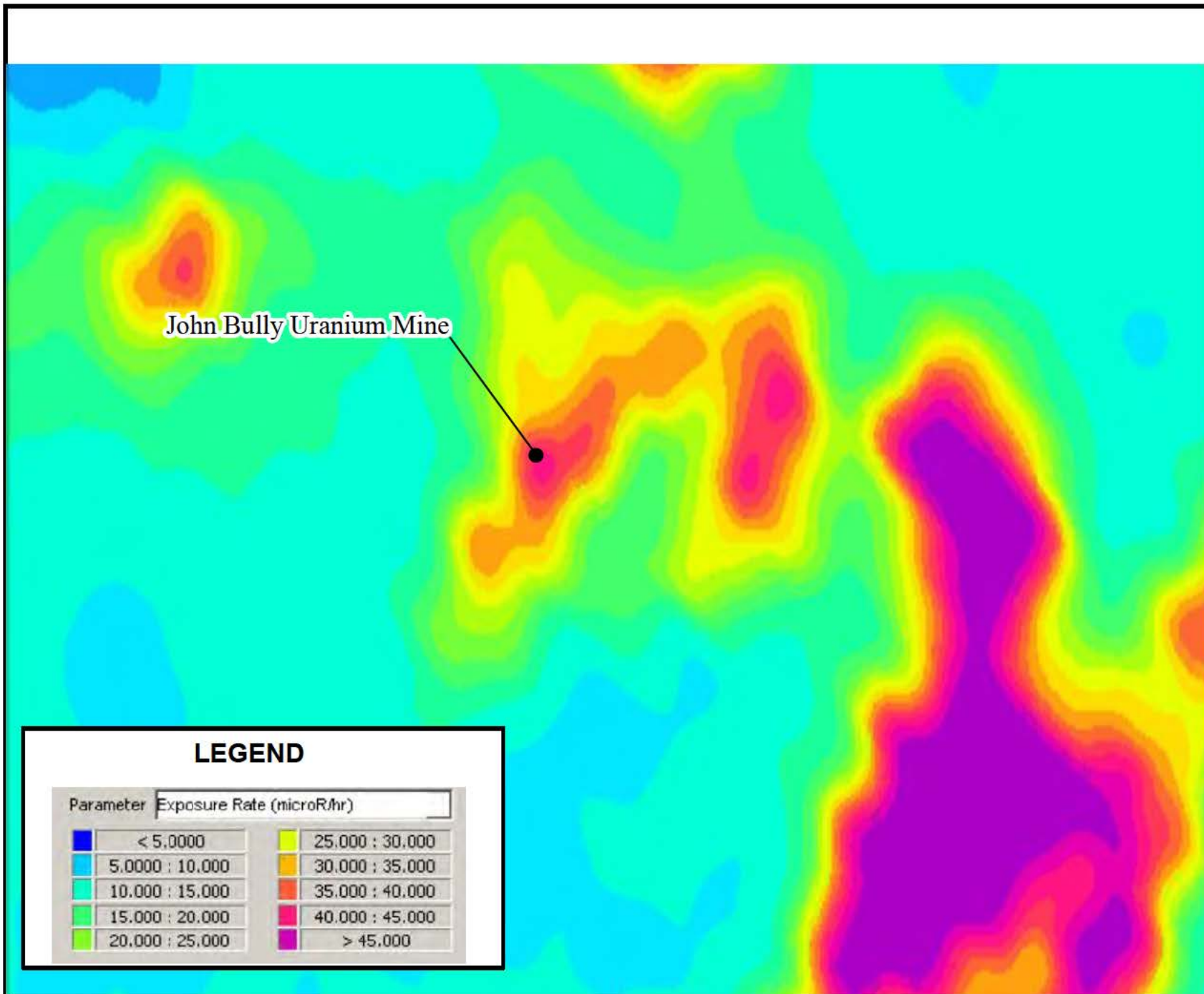
SOURCE: ESRI STREETMAP USA

DATE  
SEPT 2011

PROJECT NO  
20406.012.035.0645.01

SCALE  
AS SHOWN





John Bully Uranium Mine

## LEGEND

Parameter Exposure Rate (microR/hr)

	< 5.0000		25.0000 : 30.0000
	5.0000 : 10.0000		30.0000 : 35.0000
	10.0000 : 15.0000		35.0000 : 40.0000
	15.0000 : 20.0000		40.0000 : 45.0000
	20.0000 : 25.0000		> 45.0000



\*Units are in microroentgen per hour (uR/hr)



TDD NO: TO-0035-11-06-03  
CERCLIS: NMN000607164  
SOURCE: GOOGLE EARTH

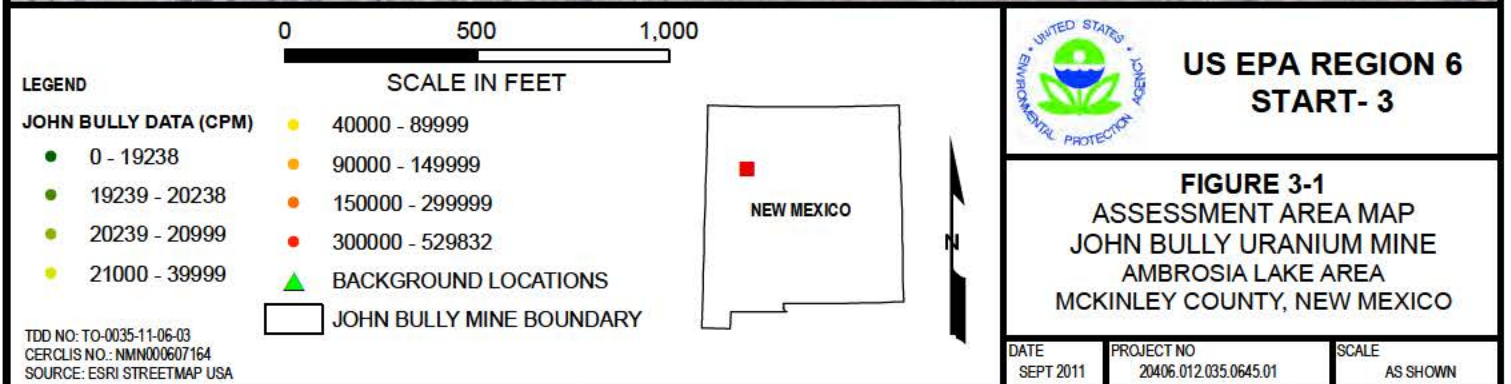
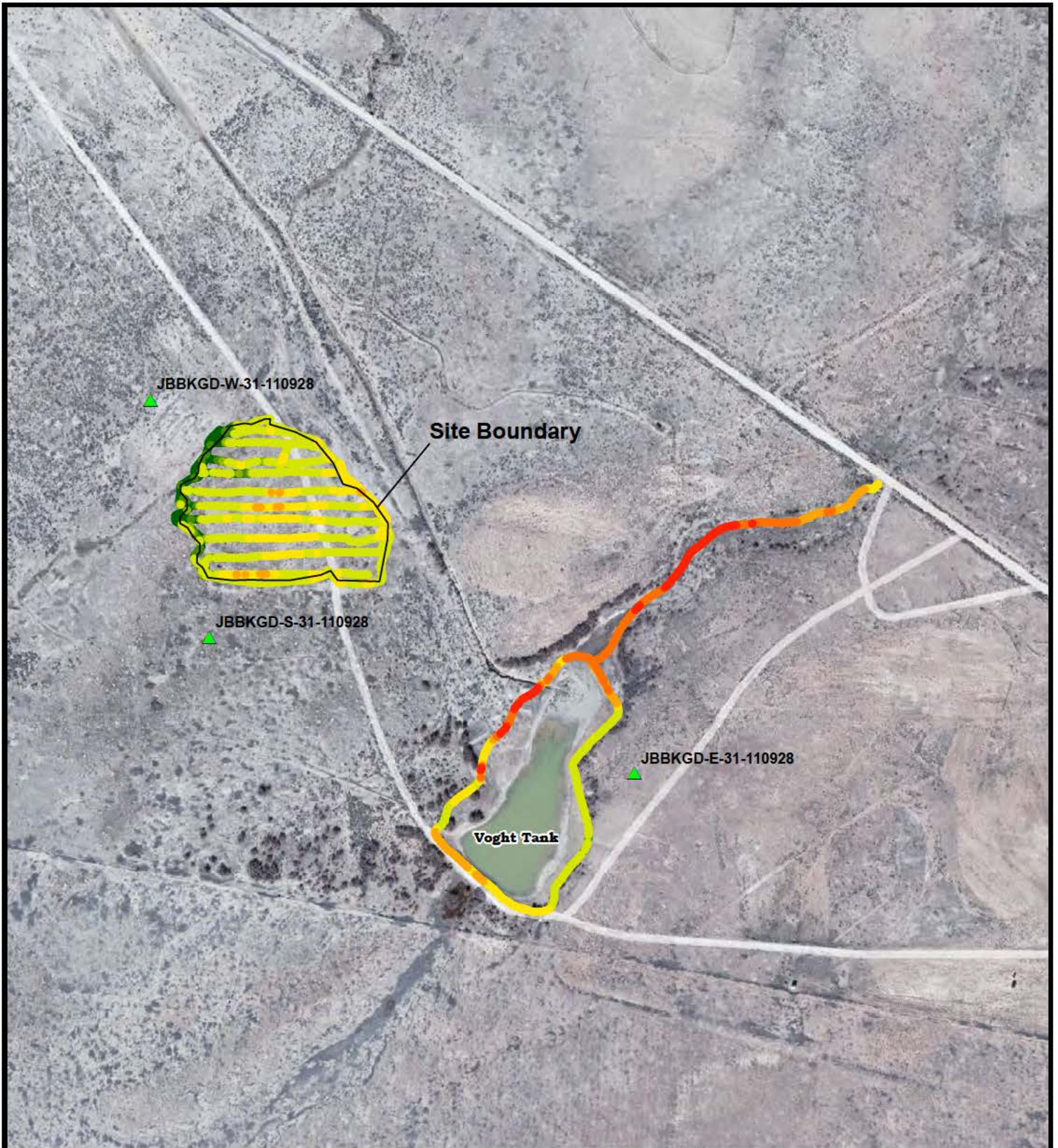


US EPA REGION 6  
START-3

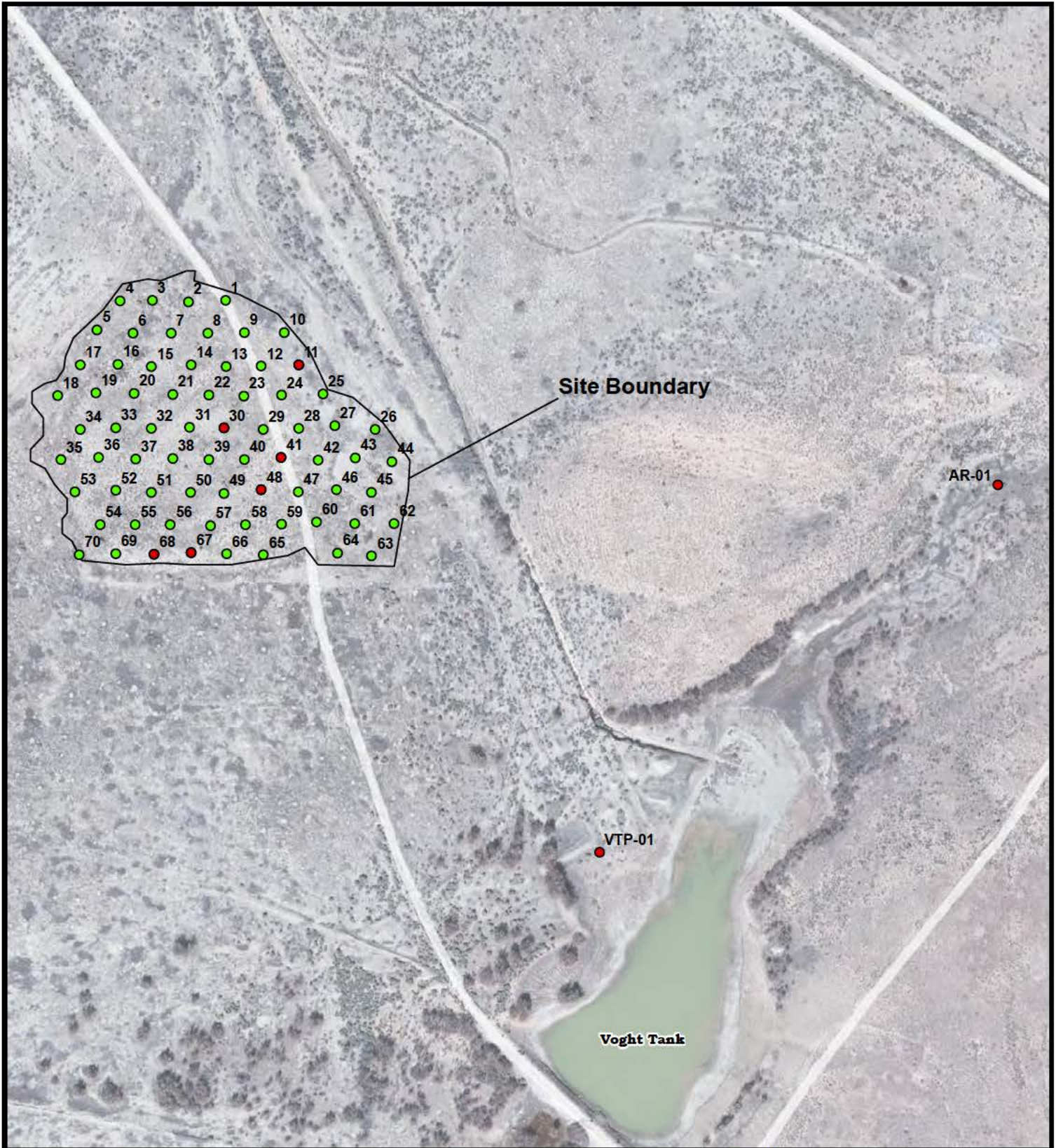
FIGURE 1-2  
JOHN BULLY URANIUM MINE  
EXPOSURE RATE MAP  
EPA ASPECT OVERFLIGHT  
DATE: 08/23/2011  
AMBROSIA LAKE, MCKINLEY COUNTY  
NEW MEXICO

DATE DEC 2011	PROJECT NO. 20406.012.035.0645.01	SCALE N/A
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Site Boundary

AR-01

VTP-01

Voght Tank

0 275 550  
SCALE IN FEET

### Legend

- STATIONARY READINGS
- STATIONARY READINGS WITH SOIL SAMPLE
- JOHN BULLY MINE BOUNDARY



**US EPA REGION 6  
START- 3**

**FIGURE 3-2**  
**STATIONARY READINGS MAP**  
**JOHN BULLY URANIUM MINE**  
**AMBROSIA LAKE AREA**  
**MCKINLEY COUNTY, NEW MEXICO**

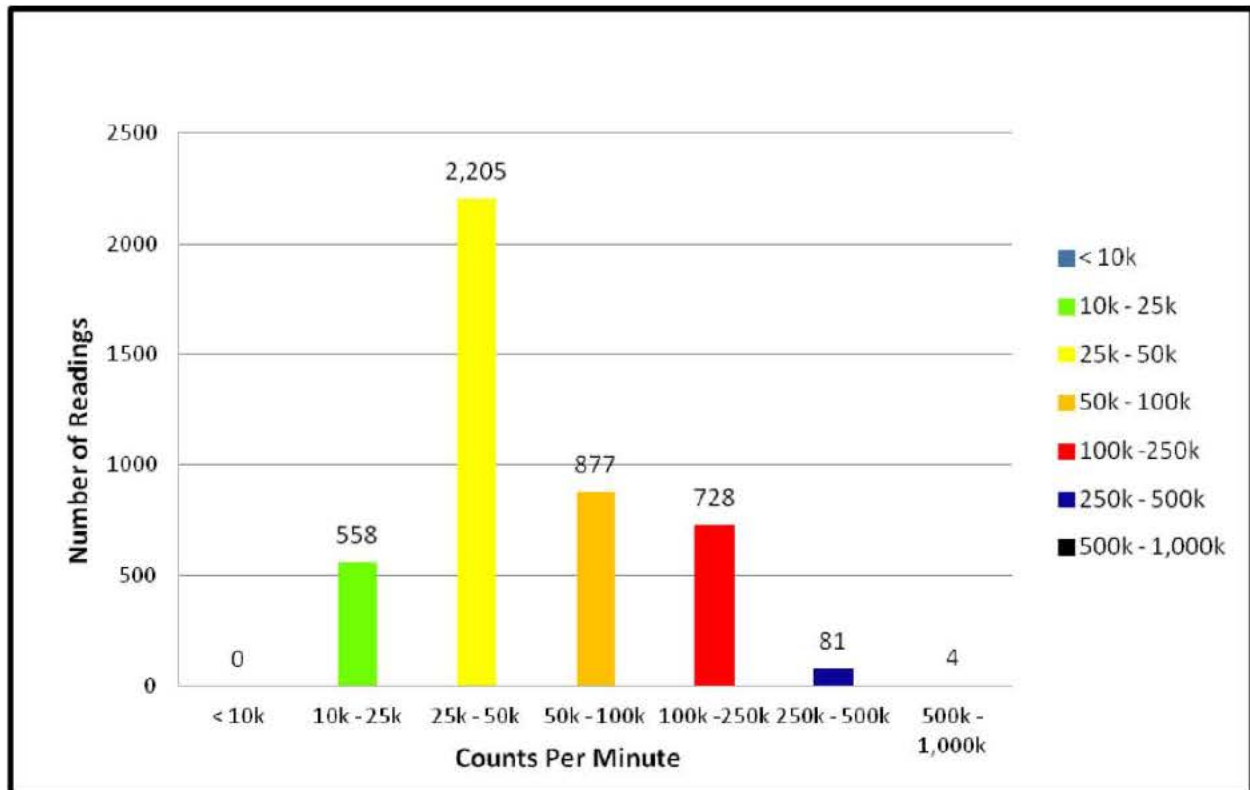
TDD NO: TO-0035-11-06-03  
CERCLIS NO.: NMN000607164  
SOURCE: ESRI STREETMAP USA

DATE  
SEPT 2011

PROJECT NO  
20406.012.035.0645.01

SCALE  
AS SHOWN

**Table 3-1**  
**Site Gamma Radiation Distribution**  
**John Bully Uranium Mine**  
**Grants Legacy Mine Sites**  
**Grants, McKinley County, New Mexico**





**Table 3-2**  
**Stationary Gamma Measurements Summary**  
**John Bully Uranium Mine**  
**Grants Legacy Mine Sites**  
**Grants, McKinley County, New Mexico**

Stationary Location ID	Gamma Activity (Counts Per Minute)	Remark
JB-01-21-110928	25,961	
JB-02-21-110928	26,020	
JB-03-21-110928	26,411	
JB-04-21-110928	19,937	
JB-05-21-110928	19,276	
JB-06-21-110928	24,563	
JB-07-21-110928	26,921	
JB-08-21-110928	27,105	
JB-09-21-110928	27,242	
JB-10-21-110928	30,208	
JB-11-21-110928	<b>62,653</b>	Sample Collected; >2X Background
JB-12-21-110928	27,243	
JB-13-21-110928	27,537	
JB-14-21-110928	27,465	
JB-15-21-110928	22,836	
JB-16-21-110928	31,612	
JB-17-21-110928	23,327	
JB-18-21-110928	22,547	
JB-19-21-110928	28,024	
JB-20-21-110928	24,967	
JB-21-21-110928	28,996	
JB-22-21-110928	36,514	
JB-23-21-110928	34,712	
JB-24-21-110928	28,558	
JB-25-21-110928	<b>42,582</b>	>2X Background
JB-26-21-110928	<b>43,650</b>	>2X Background
JB-27-21-110928	32,964	
JB-28-21-110928	34,351	
JB-29-21-110928	32,164	
JB-30-21-110928	<b>66,720</b>	Sample Collected; >2X Background
JB-31-21-110928	<b>58,309</b>	>2X Background
JB-32-21-110928	35,813	
JB-33-21-110928	28,763	
JB-34-21-110928	37,864	
JB-35-21-110928	20,549	
JB-36-21-110928	32,875	
JB-37-21-110928	<b>50,291</b>	>2X Background
JB-38-21-110928	<b>50,707</b>	>2X Background
JB-39-21-110928	<b>41,303</b>	>2X Background
JB-40-21-110928	38,201	





**Table 3-2**  
**Stationary Gamma Measurements Summary**  
**John Bully Uranium Mine**  
**Grants Legacy Mine Sites**  
**Grants, McKinley County, New Mexico**  
**(Continued)**

Stationary Location ID	Gamma Activity (Counts Per Minute)	Remark
JB-41-21-110928	<b>108,359</b>	Sample Collected; >2X Background
JB-42-21-110928	27,794	
JB-43-21-110928	28,983	
JB-44-21-110928	29,696	
JB-45-21-110928	27,553	
JB-46-21-110928	26,017	
JB-47-21-110928	33,292	
JB-48-21-110928	<b>74,382</b>	Sample Collected; >2X Background
JB-49-21-110928	<b>54,058</b>	>2X Background
JB-50-21-110928	<b>50,169</b>	>2X Background
JB-51-21-110928	35,283	
JB-52-21-110928	24,403	
JB-53-21-110928	20,678	
JB-54-21-110928	26,085	
JB-55-21-110928	30,972	
JB-56-21-110928	38,685	
JB-57-21-110928	<b>41,714</b>	>2X Background
JB-58-21-110928	34,150	
JB-59-21-110928	30,680	
JB-60-21-110928	33,568	
JB-61-21-110928	29,626	
JB-62-21-110928	27,238	
JB-63-21-110928	30,452	
JB-64-21-110928	29,069	
JB-65-21-110928	31,617	
JB-66-21-110928	26,226	
JB-67-21-110928	<b>76,808</b>	Sample Collected; >2X Background
JB-68-21-110928	<b>85,903</b>	Sample Collected; >2X Background
JB-69-21-110928	<b>72,395</b>	>2X Background
JB-70-21-110928	26,464	
VTP-01-21-110928	<b>278,280</b>	Voght Tank; Sample Collected; >2X Background
AR-01-21-110928	<b>396,482</b>	Arroyo; Sample Collected; >2X Background
JBBKGD-E-21-110928	22,529	Background Sample Collected
JBBKGD-S-21-110928	18,893	Background Sample Collected
JBBKGD-W-21-110928	19,292	Background Sample Collected



Table 3-3  
Laboratory Results for Radioisotopes  
John Bully Uranium Mine  
Grants Legacy Mine Sites  
Grants, McKinley County, New Mexico

Location	Description	Ac <sup>228</sup>	Bi <sup>214</sup>	Pb <sup>212</sup>	Pb <sup>214</sup>	K <sup>40</sup>	Pa <sup>234m</sup>	Ra <sup>226</sup>	Tl <sup>208</sup>	Th <sup>234</sup>
Soil		pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g
JBBKGD-E-31-110928	Background	0.746	1.32	0.883	1.38	14.9	-1.30	1.32	0.655	0.467
JBBKGD-S-31-110928	Background	1.06	2.02	1.07	2.08	22.4	-1.9	2.02	0.964	0.808
JBBKGD-W-31-110928	Background	0.829	1.74	0.824	1.74	17.9	0.62	1.74	0.842	1.13
Background Average	Average Background Concentration	0.878	1.69	0.926	1.73	18.4	-0.86	1.69	0.820	0.802
JB-11-31-110928	On-Site	1.25	27.7	0.658	29.0	19.0	18.8	27.7	0.575	15.6
JB-30-31-110928	On-Site	1.02	2.89	0.998	2.94	19.3	-0.924	2.89	0.780	3.22
JB-41-31-110928	On-Site	1.09	2.41	1.03	2.39	21.1	-1.08	2.41	0.889	2.05
JB-41-32-110928	On-Site	1.13	2.32	1.11	2.54	19.2	1.17	2.32	0.722	2.48
JB-48-31-110928	On-Site	1.01	3.86	1.12	3.79	22.2	2.68	3.86	0.875	1.21
JB-67-31-110928	On-Site	1.01	4.27	0.966	4.42	19.5	0.434	4.27	1.08	2.51
JB-68-31-110928	On-Site	0.91	13.1	0.883	12.80	20.1	4.91	13.1	0.728	10.4
AR-01-31-110928	Southeast of Site	4.17	752	70.6	784	19.7	56.1	752	6.66	473
VTP-01-31-110928	Southeast of Site	207	207	214	214	18.0	207	207	4.34	20.8

pCi/g: picoCuries per gram  
bold and highlighted values are greater than or equal to 3x the background average concentration  
negative results are achieved because the difference between the sample and lab background standard derive a negative number. This is due to lab counting error, ultimately indicating a "non detect" result.

Table 3-4  
Laboratory Results for Metals  
John Bully Uranium Mine  
Grants Legacy Mine Sites  
Grants, McKinley County, New Mexico

Location	Designation	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Mo	Ni	K	Se	Ag	Na	Tl	Sn	U	V	Zn
Soil		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
JBBKGD-E-31-110928	Background	3800	2U	3.2	70	0.5U	0.5U	3500	3.5	2.7	5.5	9400	6.6	1800	120	0.033U	0.99U	5.0	1100	0.5U	0.99U	99U	0.99U	5U	1.1	9.6	22
JBBKGD-S-31-110928	Background	2900	1.9U	3.5	58	0.49U	0.49U	7300	2.8	3	4.8	9400	6.3	2500	130	0.033U	0.97U	4.5	1800	0.49U	0.97U	97U	0.97U	4.9U	0.92	8.6	24
JBBKGD-W-31-110928	Background	2100	1.9U	3	42	0.49U	0.49U	5800	2.1	2.8	4.2	9200	5.5	1900	130	0.033U	0.97U	3.7	890	0.49U	0.97U	97U	0.97U	4.9U	0.80	8.3	24
Background Average	Average Background Concentration	2933	1.93	3.23	57	0.49	0.49	5533	2.8	2.8	4.83	9333	6.1	2067	127	0.033	0.98	4.4	1263	0.49	0.98	98	0.98	4.93	0.94	8.8	23
JB-11-31-110928	On-Site	2200	2U	5.3	38	0.5U	0.5U	8700	2.1	2.6	4.2	9300	8.9	1700	140	0.034U	4.8	3.5	1100	2.6	1U	100U	1U	5U	45	16	23
JB-30-31-110928	On-Site	2600	2U	3.5	49	0.49U	0.49U	7700	2.5	3.3	4.4	9900	6.4	2500	150	0.033U	0.98U	4.2	1100	0.88	0.98U	98U	0.98U	4.9U	2.3	9.1	24
JB-41-31-110928	On-Site	2700	2U	4.2	43	0.5U	0.5U	7400	2.7	3.8	5.2	12000	6.8	2200	160	0.034U	1U	4.8	820	0.5U	1U	100U	1U	5U	2.6	10	28
JB-41-32-110928	On-Site	2500	1.9U	4	42	0.49U	0.49U	6800	2.5	3.6	4.6	10000	6.1	2100	140	0.034U	0.97U	4.5	760	0.49U	0.97U	97U	0.97U	4.9U	2.1	8.6	25
JB-48-31-110928	On-Site	2800	2U	3.9	51	0.5U	0.5U	8600	2.7	3	5.1	10000	6.5	2600	140	0.033U	1U	4.6	1400	0.89	1U	100U	1U	5U	2.6	9.5	26
JB-67-31-110928	On-Site	2800	2U	4.2	55	0.49U	0.49U	8600	2.7	3.9	5.1	11000	6.7	2500	140	0.033U	0.99U	5	620	0.62	0.99U	99U	0.99U	4.9U	5.7	10	27
JB-68-31-110928	On-Site	2500	2U	5.1	61	0.49U	0.49U	8700	2.3	3.1	4.4	10000	6.3	2000	160	0.033U	5	4.4	570	2.9	0.98U	98U	0.98U	4.9U	15	13	24
AR-01-31-110928	Southeast of Site	9500	2.1U	19	130	0.92	0.53U	39000	7.9	6.6	21	19000	23	4600	320	0.046	15	12	3200	15	1.1U	170	1.1U	5.3U	110	93	51
VTP-01-31-110928	Southeast of Site	8700	2.1U	15	110	1.1	0.52U	18000	8.2	8	39	23000	30	4400	230	0.097	18	12	2600	11	1U	140	5.2U	5.2U	36	100	62

mg/kg: milligrams per kilogram  
U - Sample was analyzed for but not detected  
bold and highlighted values are greater than or equal to 3x the background average concentration